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THE FINDINGS AND RECOMMENDATIONS OF THE COMMISSION ON THE NATIONAL DEFENSE STRATEGY

HEARING

BEFORE THE

COMMITTEE ON ARMED SERVICES UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

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NOVEMBER 27, 2018

THE FINDINGS AND RECOMMENDATIONS OF THE COMMISSION ON THE NATIONAL DEFENSE STRATEGY

TUESDAY, NOVEMBER 27, 2018

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The committee met, pursuant to notice, at 9:31 a.m. in Room SD–G50, Dirksen Senate Office Building, Senator James M. Inhofe (chairman of the committee) presiding.

Committee members present: Senators Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Perdue, Sasse, Kyl, Reed, Nelson, Shaheen, Gillibrand, Blumenthal, Donnelly, Hirono, Kaine, King, Heinrich, Warren, and Peters.

OPENING STATEMENT OF SENATOR JAMES M. INHOFE

Chairman INHOFE. The meeting will come to order.

I want to thank the members of the Commission, especially the co-chairs, who are our witnesses here today, for what they've put together. I've had occasion to be involved in different analyses of our comparative strength, our threats. In my 8 years with the House Armed Services Committee and 24 years on the Senate Armed Services Committee, I've not seen anything like this before, as I said to you individually, to see the blatant honesty, straightforward approach to the problems that are out there, something that, quite frankly, that most of the American people are not aware of.

Their bipartisan report makes clear that our Nation confronts stark choices. It says—and I'm quoting from it now—"The United States confronts a grave crisis of national security and national defense. The primary duty of the Federal Government is to defend the American people, American territory, and American interests abroad." It goes on to say—and I'm still quoting—it says, "The strategic landscape is growing steadily more threatening, combined with the fact that America's longstanding military advantages have diminished." We are now in the national security crisis predicted by both the 2010 Quadrennial Defense Review Panel and the 2014 panel. We remember that very well. It's not any surprise, but it's straightforward and honest and timely.

To address our present national security crisis and restore America's eroding military advantage, have to fully resource and implement the National Defense Strategy (NDS). If we fail to do it, we

must be prepared to endure the American casualties, and even possible defeat, in wars that we could have been avoided.

In particular, I'm troubled by the Commission's unequivocal assessment that our defense strategy is not adequately resourced, that we are very near the point of strategic insolvency. The Commission—and that's why we're here today; we do have a crisis—the Commission report is unambiguous. America's fiscal problems must not be solved on the backs of our troops. Deep reductions in defense spending by previous administrations have had a huge effect. To be specific, I'll actually read this out of the report so I don't do it inaccurately—the problems that we have had is, between the two fiscal years of 2010 and 2015, we have had a dramatic reduction, in terms of constant dollars. I'll read from the report, "Constant-dollar defense spending in estimated 2018 dollars fell from $794 billion in fiscal year 2010 to $586 billion in fiscal year 2015, according to the U.S. Government statistics. In percentage terms, this constitutes the fastest drawdown since the years following the Korean War." That's how serious this is. We got ourselves in this mess; we have to get ourselves out of this mess.

This is significant—the National Defense Strategy, which strongly support, it's a blueprint to address the world as it is now. The Commission's report is a blueprint to implement the National Defense Strategy. The report points out that the country's strategic margin for victory has become distressingly small. Sending our men and women into harm's way without the training, the equipment, and the resources they need to succeed is morally irresponsible. And that happened. We know that when we sent our troops in the Brigade Combat Teams, only 30 percent of them could actually be deployed. In our Army Aviation Brigades, only 25 percent could be deployed. We saw what happened in the maintenance of our F–18s that our marines were flying. We were not adequately resourcing the equipment, and maintaining the equipment, and modernizing the equipment that our troops were using.

The Commission advises that we have a need for extraordinary urgency in addressing the crisis of national defense. I agree. I'm personally very proud of the Commission's courage to identify the threat and the urgent needs.

Senator Reed.

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you very much, Mr. Chairman, for your comments and for holding this very important hearing.

Chairman INHOFE. Let me interrupt.

I'm going to interrupt the Ranking Member, because we do, I've been informed, have a quorum right now, and they have a way of disappearing at awkward times.

[Laughter.]

Chairman INHOFE. Since a quorum is now present, I ask the committee to consider a list of 1,592 pending military nominations. All of these nominations have been before the committee the requested length of time.

Is there a motion to favorably report the list of 1,592 pending nominations to the Senate?

Senator REED. So move.

Chairman INHOFE. Is there a second?
Senator SHAHEEN. Second.
Chairman INHOFE. All in favor, say aye.
[A chorus of ayes.]
Chairman INHOFE. The motion carries.

[The list of nominations considered and approved by the committee follows:]

MILITARY NOMINATIONS PENDING WITH THE SENATE ARMED SERVICES COMMITTEE WHICH ARE PROPOSED FOR THE COMMITTEE'S CONSIDERATION ON NOVEMBER 27, 2018.

1. In the Air Force there are 19 appointments to the grade of colonel (list begins with Lisa M. Bader) (Reference No. 2155)
2. **LTG John N. T. Shanahan, USAF to be lieutenant general and Director, Joint Artificial Intelligence Center, Office of the Under Secretary of Defense for Intelligence** (Reference No. 2560)
3. **Maj Gen Kevin B. Schneider, USAF to be lieutenant general and Commander, United States Forces Japan and Commander, Fifth Air Force, Pacific Air Forces** (Reference No. 2561)
4. **In the Army Reserve there are 10 appointments to the grade of major general and below** (list beings with Stephen J. Hager) (Reference No. 2562)
5. **BG Laura L. Yeager, ARNG to be major general** (Reference No. 2563)
6. **VADM Michael M. Gilday to be vice admiral and Director of the Joint Staff** (Reference No. 2564)
7. In the Air Force there is 1 appointment to the grade of major (Sung-Yul Lee) (Reference No. 2565)
8. In the Army Reserve there is 1 appointment to the grade of colonel (Harold E. Turks) (Reference No. 2566)
9. In the Army there are 4 appointments to the grade of colonel (list begins with Benjamin M. Lipari) (Reference No. 2567)
10. In the Army there is 1 appointment to the grade of major (Jennifer L. Wright) (Reference No. 2568)
11. In the Army there is 1 appointment to the grade of major (Christiaan D. Taylor) (Reference No. 2569)
12. **In the Air Force National Guard there are 3 appointments to the grade of major general (list begins with Jeffrey w. Burkett)** (Reference No. 2599)
13. **In the Air Force National Guard there are 14 appointments to the grade of brigadier general (list begins with James R. Camp)** (Reference No. 2600)
14. **In the Air Force National Guard there are 11 appointments to the grade of brigadier general** (list begins with Darrin K. Anderson) (Reference No. 2601)
15. **Col. Thomas A. Dukes, ANG to be brigadier general** (Reference No. 2602)
16. **Col. Christopher L. Montanaro, ANG to be brigadier general** (Reference No. 2603)
17. **In the Air Force Reserve there are 10 appointments to the grade of major general** (list begins with Vito E. Addabbo) (Reference No. 2604)
18. **In the Air Force Reserve there are 14 appointments to the grade of brigadier general** (list begins with Elizabeth E. Arledge) (Reference No. 2605)
19. **Maj. Gen. Sami D. Said, USAFR to be lieutenant general, Inspector General of the Air Force** (Reference No. 2606)
20. **Maj. Gen. David W. Allvin, USAF to be lieutenant general, Director for Strategy, Plans, and Policy J–5, Joint Staff and for appointment as a Senior Member of the Military Staff Committee of the United Nations** (Reference No. 2607)
21. **RADM(lh) Brent W. Scott, USN to be rear admiral, Chief of Chaplains** (Reference No. 2609)

22. In the Air Force there are 38 appointments to the grade of major (list begins with Francisca A. Alaka Lampton) (Reference No. 2610)
23. In the Air Force there are 1,268 appointments to the grade of lieutenant colonel (list begins with Christopher Gene Adams) (Reference No. 2611)
24. **In the Air Force Reserve there are 2 appointments to the grade of brigadier general** (list begins with John J. Bartrum) (Reference No. 2612)
25. In the Army there is 1 appointment to the grade of major (Shayne R. Estes) (Reference No. 2613)
26. In the Army there is 1 appointment to the grade of major (Michael W. Keebaugh) (Reference No. 2614)
27. In the Army there is 1 appointment to the grade of lieutenant colonel (Heins V. Recheungel) (Reference No. 2615)
28. In the Army Reserve there is 1 appointment to the grade of colonel (John R. Schwab) (Reference No. 2616)
29. In the Army there is 1 appointment to the grade of major (Amanda L. Silvers) (Reference No. 2617)
30. In the Army there is 1 appointment to the grade of major (Ricky L. Warren) (Reference No. 2618)
31. In the Army there is 1 appointment to the grade of colonel (Eric R. Swenson) (Reference No. 2619)
32. In the Army there are 17 appointments to the grade of colonel (list begins with Anthony C. Adolph) (Reference No. 2620)
33. In the Navy there are 45 appointments to the grade of lieutenant commander (list begins with Joshua C. Andres) (Reference No. 2621)
34. In the Air Force there are 2 appointments to the grade of lieutenant colonel and below (list begins with Steven D. Sikora) (Reference No. 2627)
35. In the Army Reserve there are 10 appointments to the grade of colonel (list begins with Scott S. Brenneman) (Reference No. 2628)
36. In the Army Reserve there is 1 appointment to the grade of colonel (Richard S. Taylor) (Reference No. 2629)
37. In the Army there is 1 appointment to the grade of major (Daniel S. Marshall) (Reference No. 2631)
38. In the Army there is 1 appointment to the grade of major (Kindra C. New) (Reference No. 2634)
39. In the Army there are 100 appointments to the grade of major (list begins with Sandra L. Ahinga) (Reference No. 2635)
40. In the Army Reserve there is 1 appointment to the grade of colonel (Rhonda C. Pugh) (Reference No. 2636)
41. In the Marine Corps there is 1 appointment to the grade of major (James D. Foley) (Reference No. 2637)

TOTAL: 1,582

Senator Reed.

Senator REED. Thank you very much, Mr. Chairman.

Let me welcome the co-chairs of the Commission on the National Defense Strategy, Ambassador Edelman and Admiral Roughead. Thank you and all of your colleagues for the extraordinary effort that you gave to the country. I would note that one of your colleagues got a new job. Senator Kyl is with us here today. Thank you for your efforts, Senator Kyl.

This Commission was established by the Fiscal Year 2017 National Defense Authorization Act to provide an independent evaluation of the National Defense Strategy. Congress required that the Commission assess assumptions, missions, force posture and structure, and strategic and military risks associated with the strategy. After an exhaustive review, the Commission's report was released earlier this month.

While today's hearing is an opportunity to hear directly from the Commission on what they learned, I would like to highlight a handful of the Commission's findings.

First, the Commission echos the NDS in finding that the U.S. technological edge has eroded, as compared to its near-peer adversaries. As the Commission notes, maintaining or reestablishing America's competitive edge is not simply a matter of generating more resources and capabilities, it is a matter of using those resources and capabilities creatively and focusing them on the right things. The Commission makes a series of recommendations on how the U.S. can address its innovation challenges, and I hope our witnesses will discuss them with us this morning.

In addition, one of the main lines of effort of the NDS is building a more lethal force that possesses decisive advantages for any likely conflict while remaining proficient across the entire spectrum of conflict. The Commission also makes priorities the readiness of our Armed Forces and recommend a series of actions to rebuild and sustain readiness. I am pleased with this focus, since the readiness of our Armed Forces is the paramount issue for this committee.

Another critical finding of both the NDS and the Commission is the need for strong international alliances and the importance of a whole-of-government approach. In fact, the National Defense Strategy puts a premium on bolstering current alliances while pursuing new partners. However, I am concerned that the President continues to make statements and pursue actions that have undercut America's leadership position in the world, which may weaken our influence and ultimately lead to uncertainty and the risk of miscalculation. Given our panel's extensive experience, I would welcome the Commission's assessment of our current alliances, what more can be done to sustain these critical relationships, and the importance of nonmilitary elements of national power to our security.

The aforementioned issues are critically important, but I want to highlight two issues the Commission emphasized which were not a focus of the NDS. The first is the state of civilian and military relations, and the second is the deficiency of the Department's analytical capabilities. Prior to Secretary Mattis's nomination to serve as Secretary of Defense, this committee held a hearing on civilian control of the Armed Forces. Civilian control of the military is enshrined in our Constitution and date backs to General Washington and the Revolutionary War. This principle has distinguished our Nation from many other countries around the world, and it has helped ensure that our democracy remains in the hands of the people. The Commission states unambiguously that there is a relative imbalance of civilian and military voices on critical issues of strategy development and implementation. The Commission went on to state that the civilian voices were relatively muted on issues at the center of U.S. defense and national security policy, undermining the concept of civilian control.

When I read the Commission's report, I was struck by these observations and the consequences that such an imbalance can have on the development of defense policy, the impact it could have on the civilian and military personnel serving in the Department, and how it may shape the advice provided to the President. I'd like to

hear from our witnesses today what they believe is the cause of this troubling trend, and what can be done to reverse it.

The other issue is the erosion of analytic capability within the Defense Department. As the Commission points out, making informed decisions about strategic, operational, and force development issues requires a foundation of state-of-the-art analytical capabilities. However, the Commission determined that detailed, rigorous concepts of solving key operational problems are badly needed, but do not appear to exist. Therefore, I would ask the witnesses for their thoughts on how to address this shortfall.

Finally, implementing a defense strategy requires resources. The Commission assesses that, in order to implement the NDS, additional and predictable resources will be required. However, the challenges facing our country are complex and multifaceted. As such, the Commission notes that comprehensive solutions to these comprehensive challenges will require whole-of-government, and even whole-of-nation, cooperation extending far beyond DOD [Department of Defense]. Trade policy, science, technology, engineering, and math, education, diplomatic statecraft, and other nonmilitary tools will be critical. So will adequate support in funding for those elements of American power. It is a duty of this committee to ensure the men and women we send into harm's way have the resources necessary to complete their mission and return home safely. As we examine what funding requirements are necessary for the safety and security of our country, we need to look at our Federal budget in a much broader context. As the Commission states, we need a holistic approach; otherwise, the United States will be at a competitive disadvantage and we will remain ill-equipped to preserve its security and its global interests amid intensifying challenges.

Thank you very much.

Chairman INHOFE. Thank you, Senator Reed.

We're very proud to welcome our witnesses here. They've had many years of service to the security of this country. We appreciate the hard work they put into this Commission. We'd like to start with opening statements. We'll start with you, Ambassador. Your entire statement will be made a part of the record. We are anxious to hear your statement.

STATEMENT OF AMBASSADOR ERIC S. EDELMAN, CO–CHAIR, COMMISSION ON THE NATIONAL DEFENSE STRATEGY

Ambassador EDELMAN. Thank you, Chairman Inhofe. Thank you, Senator Reed. It's a pleasure to be here before this committee again. I've testified a number of times. It's always a great experience.

I'm glad you have our statement, and I'll let that speak for itself. I'm only going to make some very brief opening remarks and invite Admiral Roughead, who's been my co-chair throughout this process, to revise and extend my remarks if I get anything wrong.

First, I think we owe you a tremendous debt of thanks. That is to say, you, Mr. Chairman, Senator Reed, Senator McCain, when he was Chairman, also Chairman Thornberry and Ranking Member Smith, for nominating to this Commission a great group of Americans who approached these issues in a not only, I wouldn't

say, bipartisan way, in a totally nonpartisan way. We had a great breadth of experience on this Commission. We had very hard-working commissioners, and some of them are here today. Not all could make it. But, I think we owe you a debt of thanks. We couldn't have done this work without them. We had terrific support from the U.S. Institute of Peace, which housed us, and our executive director, Paul Hughes, who is sitting behind me, as well as LMI, which provided a lot of logistics support. We had a terrific staff. And so, if there are any virtues in the report, it comes from all those great folks who put it together.

You mentioned in your opening statement, Mr. Chairman, the earlier 2010 independent panel and the 2014 National Defense Panel that the Congress appointed. I'm sorry to confess that I'm a recidivist. I think I'm the only person who served on all three of those panels. This time, they made me chairman, so, you know, I guess people figured I had to keep doing it until I got it right. But, I would say that, on the 2010 panel, we warned, as you noted, that, absent some activity—and this was before the BCA [Budget Control Act] was passed—that we were headed towards a train wreck. In 2014, we quoted then-Secretary Hagel, who was talking about our declining margin of military advantage over our adversaries and said that the BCA had been a serious strategic misstep that was putting us on a very difficult and dangerous path. In this report, I think it was the unanimous view of all commissioners that we are now on the cusp of a national security emergency because of the waning of our military advantages and the dangers that the current world presents, perhaps the most complex, volatile, and difficult security environment that the United States has ever faced.

Our conclusions were that the National Defense Strategy that Secretary Mattis unveiled earlier this year largely moves us in the right direction. It is nested, appropriately, under a National Security Strategy, both of which stress the primacy of great-power competition, the importance of that competition to the security and prosperity of the United States, as well as the other challenges that we continue to face: an emergent nuclear power in North Korea, a would-be nuclear power in Iran, as well as a lot of the steady-state counterterrorism activity that our military is engaged in around the world.

But, while we applaud the direction that the strategy moves us in, we did have a number of concerns. Some of them have been already addressed in both your opening statement, Mr. Chairman, and in Senator Reed's opening statement. In particular, we are concerned that the strategy is not adequately resourced, that the 2018 and 2019 budgets moved us in the right direction. There's now a prospect, however, that we will be moving in the wrong direction, because, as Senator Reed just noted, we believe strongly that, for this strategy to succeed, it needs adequate, predictable, and consistent levels of funding, and the difficulties we've had funding the Department of Defense, having periodic 2-year budget deals interspersed with a series of continuing resolutions, is just not going to provide the kind of predictability that is required to develop the future capabilities and also meet some of the readiness challenges and capacity shortfalls that Senator Reed was adverting to in his opening remarks.

We're also concerned that, although the objectives and ambitions of the strategy are appropriate, that we did not see, across the enterprise of the Department of Defense, a equal understanding of what this would require of the Department; and, in particular, operational concepts for how we would actually both deter and, if deterrence fails, defeat these great-power adversaries. Therein, I think, lies an important role for the committee in its oversight responsibilities, making the Department of Defense come forward and show you, over time, how they plan to execute this strategy, which moves us in the right direction, but doesn't get us there on its own.

With that, I'll await your questions, but I invite Admiral Roughead to add or subtract from my remarks.

STATEMENT OF ADMIRAL GARY ROUGHEAD, USN (RET.), CO–CHAIR, COMMISSION ON THE NATIONAL DEFENSE STRATEGY

Chairman INHOFE. Admiral Roughead.

Admiral ROUGHEAD. Thank you very much, Mr. Chairman, Senator Reed.

First off, I will echo Ambassador Edelman's remarks with respect to the Commission, a truly remarkable dozen that came together. I thank those who appointed them. Extremely solid experience. But, I think you would all be heartened by the tone and the approach that the commissioners took. I've often said, as we went through this month-long process, that if I gave someone a piece of paper and asked them to identify who was appointed by whom, you couldn't tell, because of the common effort, the common focus that we had.

I'm pleased with the conclusions that we reached. As Eric said, we found the National Defense Strategy to be a great first step, but it's, how does it all come together? One of the things that I think must be kept in mind is that we find ourselves in a position that didn't happen overnight, whether you're talking about readiness or modernization drives the new technology, geopolitical/geo-economic competition has been moving. We are at a significant inflection point.

I had nothing to do with arranging for these young midshipmen from the Naval Academy to be here this morning. Senator Reed, it's not part of the strategy for next week. But, they are really what we're talking about here, because they're going to be the ones that will be leading our military into the coming decades. The question, I think, is, how do we get to where we need to be?

I mentioned modernization, readiness and technology. We are operating a force today that was last modernized in the 1980s. We are dealing with significant readiness challenges. We're having to deal with technology, but deal with it with competitors who are moving very quickly in a very integrated civilian/military strategy, investing billions of dollars in things such as artificial intelligence and 5G, autonomy, hypersonics. We're moving into a very new phase of warfare that I think has to be addressed, and it has to be addressed beyond just the Department of Defense.

I think the newspapers of the last couple of days highlight some of the challenges that we have. We talk, in the report, about the gray zone, that space between peace and war, the Sea of Azov, Rus-

sia, Ukraine, new construction in the South China Sea, tragically losing some more soldiers in Afghanistan in the last 24 hours. Then I read a report this morning that deals with readiness. The USS *John S. McCain,* that was involved in a tragic collision 15 months ago, just refloated yesterday. Fifteen months to restore a major capital asset to the fleet, I would submit, in today's pace and speed of conflict, is not satisfactory.

Those are some of the things that we pointed out. We are very mindful that it will take money to do that. We believe that the $733 billion that was identified is a floor, and that we need to continue that growth as we modernize not just our conventional forces, but our nuclear forces, all of which came of age back in the 1980s.

We look forward to your questions. Again, I would just like to compliment and thank our fellow commissioners for their tremendous work and service and dedication in putting this report together.

Thank you very much.

[The joint prepared statement of Ambassador Edelman and Admiral Roughead follows:]

PREPARED JOINT STATEMENT BY ERIC S. EDELMAN AND GARY ROUGHEAD

Chairman Inhofe, Ranking Member Reed, and members of the Committee we are pleased to appear before you today to address the report of the National Defense Strategy Commission.

Americans assume U.S. military superiority, but today the United States faces a growing crisis of national defense. The strategic landscape is more ominous and dynamic as violent jihadist groups, aggressive regional challengers, and ambitious authoritarian regimes challenge U.S. interests. America's traditional military advantages are eroding rapidly because of our rivals' strategies and increasing capability and our complacency. The United States must restore the hard-power strengths that buttress its foreign policy and the global environment. Doing so requires far greater coherency and urgency and a higher and more expeditious commitment of resources than the country has mustered to date.

These are the conclusions of the Commission on the National Defense Strategy for the United States, a non-partisan, congressionally chartered body we co-chaired. Our commission consulted with civilian and military leaders in the Department of Defense, representatives of other U.S. Government departments and agencies, allied diplomats and military officials, and independent experts. Our report makes clear the nation is losing its ability to defend its vital interests and preserve a global environment in which America and like-minded nations can thrive.

Since World War II, America has led a world of remarkable prosperity, freedom, and security. That achievement rested on unmatched U.S. military power. America's military strength ensured the defense and security of the United States and its allies and deterred or defeated aggression around the world and underpinned the freedom of the global commons. They averted a recurrence of the devastating global wars of the early 20th century and repeated large interventions that cost hundreds of thousands of American lives.

Today, our ability to deter and defeat are in jeopardy. China's and Russia's ambition for regional hegemony and global influence are underwritten by determined military buildups aimed at neutralizing United States strengths. Threats posed by Iran and North Korea have worsened as those states develop more advanced weapons and creatively employ asymmetric tactics. In many regions, gray-zone aggression—coercion in the space between war and peace—has become revisionist actors' strategy of choice. The dangers posed by radical jihadist groups such as ISIS and al-Qaeda have evolved and intensified. America is not simply facing renewed geopolitical competition, states and non-state actors are in conflict against the U.S. and the world it shaped.

Meanwhile, America has weakened its own defense. Decisions made by both political parties over the past decade, particularly the effects of the Budget Control Act of 2011 where defense spending fell from $794 billion in fiscal year (FY) 2010 to $586 billion in fiscal year 2015, have taken their toll. Political gridlock forced the Pentagon to operate on disruptive, short-term continuing resolutions that triggered

crippling, across-the-board cuts associated with the sequester mechanism in 2013. Accordingly, the size, readiness, and future capabilities of the armed forces have left America with less military power relative to the challenges it faces.

In the Western Pacific and Eastern Europe, critical regional military balances are shifting dramatically in China's and Russia's favor. In the South China Sea, Ukraine, and the Middle East gray-zone aggression is shifting the status quo in destabilizing ways. Allies and adversaries question whether America can uphold its commitments. From the Taiwan Strait to the Baltics, peace has long rested on the perception, indeed belief, that the United States can win decisively. As that perception fades, conflict becomes more likely.

Should war occur, American forces will face harder fights and suffer far greater losses than at any time since Vietnam. Competitors such as China, Russia, or North Korea can disrupt the homeland with cyberattacks or the real risk of limited nuclear strikes. In war with Russia in the Baltics, with China in defense of Taiwan, or with two or more rivals simultaneously American forces might fail to accomplish timely objectives at an acceptable price. Bluntly, the U.S. could lose.

Such outcomes can be avoided. The Department of Defense needs innovative operational concepts for countering gray-zone aggression and projecting power into contested zones. Bolder approaches to acquiring and rapidly fielding leap-ahead capabilities are imperative. The United States must thoroughly modernize its nuclear deterrent, increase its cyberwarfare, electronic warfare, space, and missile defense capabilities, and remedy accumulated readiness shortfalls.

A larger military is needed. The Army, Navy, and Air Force all must grow. The United States requires more—and more capable—forces in key areas from short-range air defense to precision-guided munitions and air- and sealift. These enhancements are critical to projecting American power globally and to defeating aggression in more forms and in more than one region simultaneously. The evolving, serious security challenges in Europe, the Middle East, and the Asia-Pacific demand it.

None of these improvements are possible if we are unwilling to pay for them. The Bipartisan Budget Act of 2018 was a welcome relief from budgetary austerity but it was only a first step. The recent announcement that the national security budget for fiscal year 2020 may decline from a proposed $733 billion to $700 billion is a step in the wrong direction. Sustained, timely real budgetary growth is needed to deliver the defense the American people expect and deserve.

Three-to-five percent annual real budgetary growth for defense over at least five years to fulfill the goals of the Trump administration's National Defense Strategy is necessary. Those appropriations must be predictable, year-long (ideally multi-year) to avoid the budgetary havoc wrought by habitual short-term continuing resolutions.

The investments we advocate are significant and possible only if America takes a strategic and holistic approach to addressing its long-term fiscal challenges that rein in runaway entitlement spending while generating additional revenues.

The Commission's recommendations require strong leadership and sustained attention and advocacy by both the Administration and Congress. Since issuing our report some have focused singular attention on the Commission's assessment of civil-military relations. The concern we expressed is not directed at individuals nor is it particular to the current administration. The stature of civilian leaders in DoD has diminished over time. Growth in military staffs, deference to uniformed leadership, and limits on bringing on board more junior policy practitioners are all contributing factors. Addressing this imbalance is important to our democracy's concept of civilian control of the military and in attracting future generations of civilian defense and national security leadership.

The costs of failing to address America's crisis of national defense will be far greater and will be not be measured in abstract concepts like "international stability" and "global order." They will be tallied in American lives, American treasure, and American security and prosperity lost.

Chairman INHOFE. Thank you, Admiral. I thank both of you for emphasizing how this is put together. I know, in the case—you, Admiral, were nominated by a Democrat. You, Ambassador, were nominated by a Republican. You wouldn't know it. You, I think, articulated that very well. I've not seen one like this before. I think you had both the House and the Senate, and Democrats and Republicans, on both sides.

I want to start off by highlighting the problems that were pointed out that the vast majority of the American people are not aware

of. Those of us up here are. I'm quoting from this right now—"The Commission assesses unequivocally, that the NDS is not adequately resourced." A further quote, "America is very near the point of strategic insolvency." Further quote, that "America's military superiority, which underwrites the global influence and national security"—that's of the United States—"has eroded, to a dangerous degree. America's combat edge is diminishing or has disappeared in many key technologies that underpin the U.S. military superiority. The United States is at risk of being overwhelmed, should its military be forced to fight in two or more fronts simultaneously." You know, some of us who have been around a long time can remember, that used to be our standard, we had that there. We had to drop away from that. That was regretful.

Ambassador Edelman, your report cites it very clearly, that what some of our people have said—and they've said before this committee—in terms of what needs to be done. We pointed out that, in real dollars, between 2010 and 2015, the amount of money dropped by $200 billion. It came down from $794 billion to $586 billion. Of course, that was the end of 2015. We knew we had to do something. In looking at the challenge that we had, we wanted to get up, in 2018, to $700 billion, which we did. In 2019, $716 billion. In the President's original budget, it's up to $733 billion for the fiscal year 2020.

Now, we've already established, and you've stated in the report and elsewhere, and we've also heard testimony before this committee, in two different times, that we need to be looking at it in terms of increasing to about 3 to 5 percent over inflation. Now, this is something we think we need. I agree that we need it. I think most of the people up here—and I know that you two agree with it, because it's in your report. Yet the $733 billion that they're talking about right now is one that is somewhat in danger. There's been several quotes of people who say we don't need the $733 billion. But, stopping to think about it, this is not a matter of 3 or 5 percent over inflation. Going from $716 to $733 billion is a 2.3 percent increase, which is below inflation. I believe that we're being very generous, in terms of interpreting this, in saying that this $733 billion is going to have to be looked at as a floor and not a ceiling. I'd like to have each of you comment on that, on that budget. That's going to be something that we have to deal with.

Ambassador EDELMAN. Chairman Inhofe, I agree with the statement of the problem you just made. Let me talk for a second, if I could, about how we came to the illustrative finding that 3 to 5 percent was about the right number. I will tell you that, as smooth as the Commission's workings were, and as much unanimity as we had on all of the issues that are in the report, had I asked the Commission to tell us what each member thought the top line should be, I doubt we could have come to a unanimous agreement on that. But, what we did agree on was that Chairman Dunford and Secretary Mattis, when they first testified before you and the HASC [House Armed Services Committee], not about the new NDS, but back in 2017, when they were still operating under the existing defense strategic guidance from the Obama administration, testified that they believed they needed 3 to 5 percent annual real growth in order to sustain that strategy. Our judgment as a Com-

mission was that the NDS has a higher level of ambition because of its desire to put us into a much better competitive space with Russia and China, in particular, and that, therefore, it stood to reason that 3 to 5 percent, as an illustrative number, was the minimum that would be necessary, possibly more. I mean, I think you'd get a wide range of views among us on the Commission as how much more, but that that would be the minimum. It's for that reason that we were very troubled when we talked to folks in the administration who said that they were planning—and the Department—that they were planning on flat budgets after 2019. It seemed to us that it would be very difficult to actually execute this strategy under those kinds of fiscal constraints.

I certainly agree that $733 billion ought to be, as my colleague just said, a floor, not a ceiling as you all go forward in your deliberations.

Chairman INHOFE. Yes. I appreciate that. I think that's a longer answer, but a very articulate answer. We know what we're going to have to do. We have to have the right priorities in our own thinking.

There's two other areas, and I think you'll be covering these in responses to other questions, but one having to do with China and Russia, what we consider to be our peer competitors. I think that's significant. I have found sometimes people are surprised when they find out some of the things that China and Russia are doing that are actually ahead of us in many areas. Shipbuilding maintenance, hypersonics—you know, hypersonics is something that they hadn't even started yet, but they're already rapidly passing us up, in one respect. Electronic warfare, nuclear triad modernization—we haven't done any modernization. That's going to be one of the top things that we're going to be dealing with in this committee. Air defense, artillery both in—both China and Russia have us outranged and outgunned. We've heard the experts testify to that. I'm anxious to get your response to some of those things, in response to other people's questions.

The last thing being now, "disequilibrium" is not a word that I use, but I'm sure it's real. It's out there. You say that there is a disequilibrium between the aging of America's nuclear arsenal and the vigorous modernization programs of our adversaries. I would hope that, during the course of your responses, you might articulate some examples of these, because this is something that's very distressing. I think we agree with you that the Secretaries of Defense of both the Republican and the Democrat administrations have identified nuclear deterrence as the Department's number-one priority.

Senator Reed.

Senator REED. Thank you very much, Mr. Chairman.

I, once again, thank you, gentlemen, for your great work.

I was struck, as I indicated in my comments, of your comments about civilian voices have been relatively muted on issues at the center of U.S. defense and national security policy, undermining the concepts of civilian control. Could you elaborate on that, beginning with Ambassador Edelman?

Ambassador EDELMAN. I'm happy to do that, Senator Reed.

I think, first, I'd want to make clear that this is a problem that I think all of us unanimously agreed with on the Commission. That includes a number of folks who have had recent senior experience in the building, and, of course, two retired four-stars. I'll let Admiral Roughead, obviously, speak for himself on that score. But this was a unanimous finding.

Second, this is not directed at any individuals. This is not a criticism of Secretary Mattis or of Chairman Dunford, because these trends have been developing over a long period of time.

Third, I would say that this is a perennial problem. It's not a problem that, you know, obtains of an easy solution, because if, as Professor Corwin said, the Constitution is an invitation to struggle between the legislative and executive branch over the control of foreign policy, the National Security Act of 1947, in my view, is an invitation to struggle between military and civilian leaders in the Department of Defense over the direction of defense and national security policy. If one reads the official histories of the Office of the Secretary of Defense, one of the themes that emerges from that is the struggle of a variety of different Secretaries to try and develop the tools, the staff, the means to accomplish the constitutional objective of civilian control. This is a perennial problem and a lot of it is just about maintaining a balance.

Part of the issue, frankly, has been vacancies on the civilian side for a long period of time. I know, when I was serving in the Bush 43 administration, we routinely had about 25-percent vacancy rate among the civilians. Over the years, those vacancy rates have become, you know, more problematic and more pronounced. Even today, 2 years into the current administration, there are still a number of vacancies in OSD [the Office of the Secretary of Defense]. I think that's created a kind of imbalance, in terms of the voices being heard on national security policy.

I wouldn't want my comments to be misconstrued as saying that the Chairman doesn't have an important role to play, including as a global force integrator. I think, on the Commission, all of us had sympathy for the notion that somebody has to adjudicate, requests from combatant commanders about who goes where, under what circumstances. But, we felt strongly that that needs to be embedded in a healthy military/civilian debate, and a management of the natural tensions in a constructive way that we currently see as absent.

Senator REED. Admiral Roughead, any quick comments?

Admiral ROUGHEAD. Yes. I would echo what Ambassador Edelman said. A lot of the presses could have picked up on this and tried to say it's focused on individuals. That is not the issue. In fact, as I think this through and as we discussed it during the course of the Commission, this has been a long time in coming. In fact, if someone were to ask me, I would say the genesis is in 1986, with the passage of the Goldwater-Nichols Act, which, since that time, we've seen large increases in military staffs, the combatant commanders have gotten larger, the Joint Staff has gotten larger. We have invested heavily in professional military education, so we've really upped the intellectual heft of those who are serving in uniform today. You have a mass and a quality on the military side that it can move quickly, generate, you know, great options.

I would also say that there has been a deference to those in uniform, both by the executive branch and in the Congress, as opposed to holding to account the civilian leadership of the Department. My opinion on that.

I think it also is reflected, as Ambassador Edelman said, the vacancies, but it also, I believe, has dissuaded young people from coming into the policy space of defense and national security. That's the seed corn for the future.

This is an issue that has been a long time in coming, and I would argue that it's one that really needs to be thought through as to how you want to shape the balance between the military and civilian, going forward.

As someone who has been in uniform, my civilian leaders that I work for, we had some pretty sporty discussions from time to time, but it was always clear to me where the coin landed. I think that needs to be reinforced.

Senator REED. Thank you.

In a spirit of sportsmanship, let me wish the midshipmen good luck.

[Laughter.]

Chairman INHOFE. Thank you, Senator Reed.

Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman.

Gentlemen, I know the Commission's report strongly endorses nuclear modernization and also recapitalizing the triad. It's called the critical imperative. But, I just want to be absolutely clear on this point. Does the Commission believe the rationale for the triad exists today?

Ambassador EDELMAN. Senator Fischer, I think the rationale continues to exist to have, as President Kennedy once said, a nuclear force second to none. This strategy, in some ways, requires even more reliance on nuclear deterrence than the previous strategy did. In order to have a deterrent that is effective, we always need to remember that what matters is not what we think deters, but what the other side actually finds deterring. For that reason, I think having both an air-breathing leg of the triad, that can be used for signaling and can be recalled, or having one that has a fast flying capability to destroy deep and buried targets quickly, and also having one that remains invulnerable to preemptive strike because it's lodged under the sea, makes as much sense as it ever has.

Senator FISCHER. Thank you.

Admiral.

Admiral ROUGHEAD. I agree. I would say that the increased challenges that we will face are beyond the platforms. The complexities and the security that is going to be required in nuclear command-and-control systems of the future will be far more demanding than what we've had in the past.

The other thing that must be taken into account, as well, is the investments in the stewardship of this capability that we have—investments in the people, investments in the infrastructure, investments in the labs. When we talk about the triad, absolutely the three legs are required, but it's important that those other dimensions be addressed, as well.

Senator FISCHER. Thank you.

We're hearing from critics of nuclear modernization. They often advance the argument that we cannot pay for both nuclear and conventional modernization. Your report talks about the costs, which it notes will peak at about 6.4 percent of the Department's budget, and states that, "America can surely afford to pay this price to preserve such critical element of its national defense." It goes on to argue that we cannot hollow out nuclear capabilities to pay for conventional capabilities, and vice versa. Is it fair to say that this notion of funding one or the other is a false choice, and that the risks of going down that path are unacceptable?

Ambassador.

Ambassador EDELMAN. Senator Fischer, I certainly agree with that. One of our concerns was that, in talking to, in particular, the Service Chiefs of the Air Force and the Navy, which are facing major recapitalization of their respective parts of the nuclear triad, are also under pressure as part of the strategy to develop a more lethal, agile conventional force. This is one of the reasons why we find the resource constraints very troubling, because the danger—I fear, anyway, personally—is that we will do a very bad job of both if we don't adequately resource the strategy. We need to have both a strong conventional and a strong nuclear deterrent.

Admiral ROUGHEAD. Agree completely.

Senator FISCHER. Thank you.

The report also mentions that the Commission consulted with diplomats and military officials from our allies and our partners. Could you talk a little more about this? Who was consulted? What were the primary reactions to the National Defense Strategy? Were there any observations that you found particularly meaningful?

Ambassador EDELMAN. We spoke with—and I hope I'm not going to insult any of our allies by leaving anybody out, but we spoke with our British, French, Australian, Japanese colleagues—Korean colleagues, as well.

Senator FISCHER. Were there any themes that seemed to be universal in those conversations that you had?

Ambassador EDELMAN. I think most of them appreciated the focus on great-power dynamics in the strategy. I think many of them had similar questions to those we had. A lot of them were focused more on some issues of defense industrial cooperation among allies, which we address, not in detail, but in passing, in our report. I think that was something that was of concern.

To your question about, you know, findings that were interesting, one of the things that the French pointed out to us from their defense review, which I personally found very interesting, is, they had similar concerns to some of the ones we express in our report about the defense industrial base and the role of some of our great-power adversaries, potentially, in our supply chain, and as well as with innovation. The French have started a fund, actually, to buy up some of their own French technology startups to preclude them being taken over by foreign nations who might seek to use that technology for purposes that would be competitive with the West. That struck me as an interesting idea. We didn't develop it ourselves in the report, but it might be something worth looking at.

Admiral ROUGHEAD. I would say that all of the allies that we talked to live in neighborhoods where bad things are happening, so their interest in "Where is the U.S. going?" I think was clarified by the strategy that they read and the need to eliminate some of the dissonance that they're hearing with respect to the importance of our allies.

I'd just add one thing to Eric's comments about the French. It was my understanding, also, that some of these companies are acquired because they have promising technology, but they're circling the drain and will fail. This is a way for that technology to be advanced and matured and benefit the defense capabilities of France. It's very insightful and very worthwhile and that dialogue should continue.

Senator FISCHER. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Fischer.

Senator Shaheen.

Senator SHAHEEN. Thank you.

Thank you, to both of you, for the impressive work on the report.

Ambassador Edelman, I want to pick up on something that I think I heard you say at the end of your remarks. You talked about the operational concepts to win the great-power competition being missing across the whole Department of Defense. Did I understand that correctly? If so, can you explain a little more about what you mean by that, and what you see being done to address it?

Ambassador EDELMAN. Senator Shaheen, I think it manifested itself in a couple of different ways, actually, in our discussions. For instance, the strategy does talk about taking, potentially, more risk in the Middle East; yet, when we asked different folks in the Department with different sets of responsibilities that touched on this issue, "Where, exactly, are you talking about taking the risk? Is it risk with regard to the fight against ISIS [Islamic State of Iraq and Syria], or is it risk with regard to containing Iran, or is it risk in Afghanistan?" we got different answers from different people. I think we were concerned that there wasn't complete, common understanding, across the enterprise, of what the strategy really was going to require.

Second, there were a lot of concepts in the strategy like expanding the competitive space, which, upon examination, turns out to be what we used to call, in the old days, the Cold War, "horizontal escalation". When we poked at these things, we found them very ill-defined, and it didn't seem that there was a whole lot of "there" there. Now, that's not to say that good people aren't working very hard in the Department to give those concepts more reality, but we're a bit away from actually having the reality, I think.

Senator SHAHEEN. Is that a leadership function? Is that an oversight responsibility? How do we fix that?

Either of you.

Ambassador EDELMAN. I'll let Admiral Roughead speak for himself. My view is, it's both an oversight function for the committee to demand that the Department explain how it's going to accomplish these things, and it's a responsibility of the Department's. I know Deputy Secretary Shanahan is working hard to try and make the big changes that are going to be required. I think one of the

things we were struck by was that a lot of people didn't seem to understand how big a shift this is for the Department to move back into a world of great-power competition, as opposed to the counter-insurgency, stabilization, counterterrorism focus that we've had for much of the last decade and a half.

Admiral ROUGHEAD. To follow up on that, for the last 18 years, we've been focused in one very specific area, a very unique type of warfare, and we now find ourselves going against potential adversaries who have invested in ways to stymie our efforts in regions that are still of critical importance to the United States. We have taken our eye off what it really will require to get into thinking our way through it for the foreseeable future. In the near term, we have what we have. How do we use that? What's the best way to use it? How do we come up with these concepts? Where do we go to test them? How do we bring the young thinkers into the game to say, "Well, that may work, but here's a better idea. Let's try that"? We used to do that extensively.

The other thing that is required is, we have to start thinking our way through some of these more technologically challenging environments that we haven't had to worry about. We have operated in the Middle East with complete disregard for flying around in contested airspace. That is no longer the case.

Senator SHAHEEN. I appreciate the technological challenges, and I think it's very easy—or, it's easier, maybe, to track how we're doing with nuclear weapons development, with technological developments. But, you also identify two areas where I think it's much harder to track how we're doing and to, not just measure, but to figure out where the lines of authority and the structures are. That's in the cyber area and also in the gray-zone conflict. As we look at where much of the action has been over the last 10 years or so, outside of the counterterrorism issues, it's been in those two arenas. Yet, we still don't have identified authorities to address cyber, we still don't have ways, or at least that seem apparent to me, to train for a gray-zone conflict, and just watching what's happened with Ukraine and Russia this week. I mean, we have another situation where it doesn't appear that we have a direct response for how to deal with that.

I know I'm out of time, but can you just respond to that?

Ambassador EDELMAN. Like you, Senator Shaheen, I think a lot of us were troubled that issues like responsibility and authority in some cyber areas still seem to be—and fundamental definitions still seem to be contested and unresolved.

Senator SHAHEEN. Right.

Ambassador EDELMAN. It's one reason why we, as a recommendation, suggested actually creating a commission to look at this in more detail than we were able to because we were looking at the whole rather than the part pieces.

Senator SHAHEEN. Sure.

Ambassador EDELMAN. I would note that, in 2010, we recommended a compensation commission, which led to the creation of the Maldone Commission, which I thought had pretty good report. Hopefully, if you all approve, some of these issues maybe could be at least articulated in a way that yields a path forward, if there's a commission.

On measuring how we do in other areas, you know, the example people use always from the Cold War is the development of air/land battle as a way of using our unique advantages to go against some of the disadvantages the Soviet Union had. I think that's really what Admiral Roughead was saying when he was speaking, a minute ago, of what we used to do, in terms of wargaming and exercising, et cetera.

Senator SHAHEEN. Right.

Ambassador EDELMAN. We need to do more of that.

Chairman INHOFE. Thank you, Senator Shaheen.

Senator SHAHEEN. Thank you.

Chairman INHOFE. Senator Cotton.

Senator COTTON. Thank you, gentlemen, for your service on this Commission, and your many years of service in our military and our diplomatic corps. I want to touch on just a few issues that have already been addressed here in a little more detail.

Senator Fischer talked about nuclear modernization and conventional modernization. If I understand your answers, the point as to why we have to have both is, what good is conventional modernization if Russia or China, or Russia and China combined, have the ability to destroy our way of life with nuclear overmatch? Is that correct, Ambassador Edelman?

Ambassador EDELMAN. I think that's one part of it, Senator Cotton. The other part of it is the fact that Russia, at least, has been using nuclear threats in a way that sees it as part of its suite of tools, including from conventional up. It's a question of escalation dominance as well as the danger of crisis instability and attack on the Homeland.

Senator COTTON. Yes.

Let's turn to the question of resources that Senator Inhofe started out with and many others have addressed, as well. Admiral Roughead, I'll this address towards you. The point that the report makes is that $733 billion for the next fiscal year should be considered a floor, and that we probably should be more than that, but what is especially alarming is the reports we have seen that the administration maybe consider cutting 5 percent from the Department of Defense, all the way down to $700 billion. Is that correct?

Admiral ROUGHEAD. That's correct, yes, sir.

Senator COTTON. There's lots of things that you recommend in this report that we ought to do as a government and as a nation. A lot of those lay in the hands, though, of people like the President of the United States, the Secretary of Defense, the Chairman of the Joint Chiefs, and the Service Chiefs. We're Congress. The thing we do best is pass budgets and spend the taxpayer dollar. Is the simplest thing we could do to help achieve some of the goals that you lay out in your report repealing the Budget Control Act caps for fiscal years 2020 and 2021, and ensuring that $733 billion next year remains a floor?

Admiral ROUGHEAD. I think that's the most important thing you can do. I would also add that I believe that there is a sense that the last 2 years of growth have fixed the problems. Nothing could be further from the truth, whether it's in readiness, whether it's in conventional modernization or nuclear modernization. But, I think that that is kind of feeding this idea that it's okay to taper down.

Now is the time that we really need to have a consistent strategy, going forward, to build——

Senator COTTON. So, those last 2 years have been a down payment?

Admiral ROUGHEAD. Right.

Senator COTTON. That last point you made there is that it's not just a matter of the level of funding, but the predictability and the smoothness of funding, that this is probably something Congress should try to address early next year in a budget agreement and in an appropriations bill for the Department of Defense, as we did this year for the first time in many years.

Admiral ROUGHEAD. I agree. I would argue that the failure to pass a predictable budget has done more harm to readiness than any other thing that has happened.

Senator COTTON. Okay.

Ambassador Edelman, I want to turn to you about cyber and a few of the other, kind of, high-tech concepts we've discussed here—artificial intelligence or quantum computing or 5G, all very critical to our defense as well as our prosperity. There is a belief, in some quarters, though, that those kinds of technologies will obviate the need for more traditional weapons, that maybe the Navy can mothball some ships and subs, and the Air Force doesn't need as many fighters and bombers, and the Marine Corps and Army doesn't need as many trigger-pullers on the front line. Is that the case? Are things like cyber and artificial intelligence, quantum computing, sufficient to replace good, old-fashioned trigger-pullers and airplanes and ships?

Ambassador EDELMAN. Not in my view, Senator Cotton. I think, first of all, many of these technologies have great promise, but it's going to take a bit of time to develop the technologies and then, as Admiral Roughead said, figure out how we're going to use them, operationally, before you can really count on them. I don't think that obviates the need for, in the medium term, having a strong, robust, conventional deterrent to dissuade potential adversaries for taking actions that are inimical to our strategic situation.

Senator COTTON. Thank you.

In the time remaining, I'd like to turn to one final question. On page 69 of your report, in Readiness, you talk about how our people are the most important asset that we have in our military. Yet, the number of people who have required fitness and propensity to serve is in decline, and you recommend that DOD and Congress take creative steps to address those aspects of the problem rather than relying solely on ever-higher compensation. Could you be a little more specific about what kind of creative steps you have in mind? Because I do think this is a challenge across all our Services.

Admiral ROUGHEAD. I think, clearly, we need to stop looking at the accession point for those who are coming in, but look at, how are we preparing young people to live and ultimately serve in this more complex environment? How are we preparing people that will be able to withstand the physical stresses of serving in the military? As we talked about it, it's not the entry point, it's, what is being done? What are the programs? How are we investing in the youth of America to be prepared to serve in the military and in national security of the future?

Senator COTTON. Thank you, gentlemen.

Chairman INHOFE. Thank you, Senator Cotton.

Senator Kaine.

Senator KAINE. Thank you, Mr. Chair.

And thanks, to the witnesses.

I actually want to pick up on two of the topics that Senator Cotton discussed. First is the budget caps. Your recommendation 24 is to end the BCA for the next 2 years. I think that would be a very smart thing for us to do, so I would echo the comments that Senator Cotton made about that. I'm worried a little bit that we engage in a little bit of magical thinking around here on this, because you're not the first that have suggested that we should end the BCA. We've heard that since I came into the Senate in 2013, that sequester and BCA were going to be harmful to national security, and yet, we are kind of kicking the can down the road. I was a strong supporter of the deal that we just made. I think it's great. But, it did continue to leave us under the specter of the BCA. If we're serious about your recommendations and the recommendations in the strategy, we would follow that recommendation.

The budget deal was good, but we also just did a tax deal that increased the deficit by—it will be 2 trillion, with interest, over the next 10 years. That's going to make it harder to do the very things that you suggest that we need to do. I think we have to align our actions with our words, and make sure that our actions are a fair reflection of realistic expectations. I think that's a challenge for us.

Senator Cotton asked one question about Russia and China, and I want to explore this with you. The National Defense Strategy assumes we have five competitors—two peer competitors, two nation-state competitors that are sort of regional competitors, and one set of nonstate actors that are competitors. But, I have been concerned, over the course of the last few years, when I hear the analysis of these competitors, there's seldom any analysis about their possible combinations. Of course, when we're talking about our own capacities, we always talk about alliances, you guys do—NATO [North Atlantic Treaty Organization] and other alliances. We talk about the importance of those alliances. But, we don't really analyze our competitors in terms of potential combinations. When we take steps in the diplomatic space that make Iran want to be closer to Russia or China, when we see Russian military exercises that the Chinese join in, as was the case recently, we're seeing combinations among our five competitors, and yet much of our analysis about our defense need does not focus upon that as a realistic option. What would you say to us as we, as a committee, grapple with that? It's not just that we need to fight, maybe, a two-front war. We might need to be engaged in military action where Russia and China decide that they jointly have an interest in pushing us back in the Arctic or somewhere else. How should we approach that?

Ambassador EDELMAN. Senator Kaine, you've put your finger on one of the major concerns that we had about the strategy. The strategy very explicitly says that it is meant to make us more competitive with and, if deterrence fails, defeat decisively one great-power competitor while deterring the others, essentially using our nuclear deterrent. But, "the others," when you peel back the onion, means Iran, North Korea, et cetera. It's really not aimed at Russia

per say, I mean, it's meant to deter Russia, too, but it's really focused on these minor competitors. When we ask the question, "What happens if we have both at the same time?"—frankly, we didn't get a very good answer about what that means.

Senator KAINE. There's different ways to have both at the same time. You could face separate challenges from each at the same time, or you could face some form of coordinated challenge. Both Russia and China are authoritarian nations, they don't like U.S. sanctions policy, they don't like other things we do in the international sphere. When Nixon did the opening with China, a lot of the reason for the opening was to stop China and Russia from finding common cause so that we wouldn't have to deal with a combined threat. Yet, it seems like the analysis we've seen, whether it's in the strategy, whether it's the RAND analysis we got recently, it looks at our competitors as if they're siloed with no real interest in ever combining. I think that's quite unrealistic.

Ambassador EDELMAN. I agree, it's not realistic and that one would have to be—whether it was concerted, which would be a major challenge, or whether it was opportunistic, because one of us is in a conflict with—one of them is in a conflict with us all—ongoing. Either one of those scenarios would be very stressful. The answer we got when we asked was, "Well, that would be World War III. That would be on the order of World War II. It would require total national mobilization." I think we agree, it would require total national mobilization. We need to begin actually having a discussion about this. In the 2010 and 2014 reports, we talked about the fact that the Nation needed to start thinking again about potential mobilization in time of conflict. We haven't really done that. We really need to now, because the prospect of this, I think, is a very, realistic one. Hopefully, it's not the future we have, but it's one that we can't blink away, I think.

Admiral ROUGHEAD. No, and I would agree. I would say that this whole idea of the gray zone puts it in a completely different space, because it may not be, "Is it a carrier here or a carrier there?" It may be there's an economic issues that's taking place. How do we think our way through that? It's much more complex.

The other thing that's somewhat related—and we had really good discussions on this—is the idea that we might be able to control the situation, by trying to move into some horizontal escalation. I would argue that, in some situations—for example, if China is hellbent on absorbing Taiwan—we might want to do all we can in another area, but I'm not sure that's going to deter them once they get the ball rolling. Again, this is where the thought process and the different types of concepts need to be brought into the discussion.

Senator KAINE. Thank you.

Thank you very much, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine.

Senator Ernst.

Senator ERNST. Thank you, Mr. Chair.

Gentlemen, thank you very much for being here today.

This discussion has been very helpful. I notice we tend to build upon each other's questions, so I'm going to go ahead and pick up, Admiral Roughead, with where you left off. You were just dis-

cussing the gray-zone activities. I'd like to delve into that a little bit more. We deal with that a lot in our Emerging Threats and Capabilities Subcommittee here in the Armed Services Committee.

In your opening statement, you note, "China and Russia's ambition for regional hegemony and global influence are underwritten by determined military buildups aimed at neutralizing United States strengths. Threats posed by Iran and North Korea have worsened as those states develop more advanced weapons and creatively employ asymmetric tactics. In many regions, gray-zone aggression, coercion, and the space between war and peace has become revisionist actors' strategy of choice." I share that concern. It's something that I spend a lot of time thinking about. I'm increasingly alarmed at our adversaries' attempt to offset our great strengths. You've already noted some of those, whether it was the Chinese bullying in the South China Sea, Iranian influence throughout the Middle East. It might be Russian cyberattacks and disinformation or propaganda that is thrown out there. Whatever it happens to be, we do find ourselves facing adversaries that are increasingly capable in those areas.

If you could, delve in a little bit more, and maybe visit with us about where you see our Special Operations Forces (SOF), where they fit into the great-power competition.

Admiral ROUGHEAD. I would say that they may be more applicable in different regions. I believe that, in the Middle East, we are seeing excellent employment of our Special Operations Forces. I think that we will see increasing involvement as China presses into its Belt and Road in a fairly significant way. I think, we rarely talk about Africa these days. We'll talk about Mali, and we'll talk about what happened in Libya. But, I think that the nature of how China will move into resource-rich Africa and the relationships we have there is going to be important. I think those are places where Special Operations Forces are absolutely essential. I think, in many areas, if you wanted to talk about it, we'd probably have to go into a different space to do that.

But, I think it's important to really look at the array of U.S. capabilities that we have. This is where I think, in particular, the alliance relationships come into play, because, in many instances, our allies and partners may have relationships that can be an advantage to us and that we can work together on.

It really is a full spectrum. I don't like to use the "butted" words, but that's what we're talking about.

Senator ERNST. Right.

Ambassador EDELMAN. If I could just add, Senator Ernst, and going back to both Senator Shaheen's question and Senator Reed's opening remarks, one of the things I think we found on the panel, and I think it was unanimous, again, was that, while the strategy talks about the United States now being in competition with Russia and China and these other potential adversaries, in the gray zone, we're in conflict with them already every day. This is actually ongoing. You see it in the cyber realm, you see it in other realms, as well. It's something that goes well beyond—this is to Senator Reed's point—well beyond the purview purely of the Department of Defense. In a lot of areas, it's not even necessarily the Department of Defense that would be first, in the line of fire, here. It would be,

really, the use of intelligence, diplomacy, other tools of government. It's why we stress, in the report, the importance of whole-of-government solutions to many of these problems.

Senator ERNST. I agree. Making sure that we are resourcing those Special Operations Forces correctly is important, as well. We talked a little bit about personnel, too, if we can utilize conventional forces rather than our SOF operators, that also would be part of that strategy. Would you agree?

Admiral ROUGHEAD. I would agree with that. The other thing I think is important—and we mentioned it in the report, with respect to some of the operational challenges that the United States faces, and I would take that also into the space realm—that I think that some of these have been put into the classified domain, and it has deprived the American people from understanding what exactly is going on out there.

Senator ERNST. I agree.

Admiral ROUGHEAD. I think looking at what is really classified and what is not is something that is very important in having the type of discussion and, indeed, debates that are going to be taking place as a result of some of these recommendations.

Senator ERNST. I appreciate the input. Thank you, gentlemen, very much.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Ernst.

Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

To our witnesses, thank you for your testimony today.

I'd like to expand a little bit on some of the discussion we've had already related to operational concepts and some of the problems associated with that. And I'd turn to page 26 in your report, when you talk about the threats that we face from both Russia and China, and how those are escalating. And you write, "These countries are also leveraging existing and emerging technologies to present United States forces with new military problems, such as China's anti-access area-denial capabilities and the Russian hybrid warfare approach employed in seizing eastern Ukraine." Then the next sentence, I found particularly troubling: "Detailed, rigorous operational concepts for solving these problems and defending the U.S. interests are badly needed, but do not appear to even exist. We recommend the DOD more clearly answer the question of how it intends to accomplish a core theme, defeating a major power in competition and war, and without a credible approach to winning a war against China or Russia, DOD's efforts will be for naught. Similarly, the United States needs plausible strategies and operational concepts for winning these competitions." It goes on to say, "DOD should identify what the United States seeks to achieve, explain how the United States will prevail, and suggest measures of effectiveness to mark progress along the way."

Now, these seem to be incredibly fundamental questions. What I'm—the question I have is that, if we don't have answers to these very fundamental questions, how do you then, in the next part of the report, say, "Well, we need a whole lot more resources. We've got to spend a whole lot of money"? You know, I come from a business background, and normally you try to figure out, What do we

have to achieve? How do we get to that objective? And then, how do we resource it? Here, you seem to be saying, "We don't know how to do that, but we do need a whole of resources." But, I can't go to—back to the taxpayers and say, "Just give a blank check to the Department of Defense," even though we can't answer these fundamental questions. Could you please help me with that?

Admiral ROUGHEAD. I've—I would submit that, in several of the areas that we looked at, particularly with respect to what China is doing in the East Asian littoral, their ambitions within the Indian Ocean, the capabilities that they have in play, and what we currently have—it's apparent that we are disadvantage in those areas. I would also argue that, as Russia acts on its periphery, that the challenges that are faced there, especially, as we addressed earlier, the fact that we have not been working in these more complex environments, really demands that we up our game there. We have not been investing in the types of training and range infrastructures that allow our people to practice in those more complex environments.

We did not get into a line-by-line costing of what it would take, but it was apparent to us that there is an imbalance, that the investments are required. We haven't been making investments in this type of warfare for decades now. That is the basis of our recommendation.

Senator PETERS. Well, I—my sense before your answers are—is that we—from what I just read, is that we don't really know what we need to do in order to counter the threats that you have just mentioned. How do you resource something if you don't really know how to even counter it?

Ambassador EDELMAN. Senator Peters, I think there are a couple of different elements here in play. One is, to be fair to our colleagues in the Department of Defense, since the end of the Cold War, there's been an assumption built into most of what the Department has been doing, which is that the era of great-power competition was over. We were working towards cooperative relationships with China, which is why we took them into the WTO [World Trade Organization] in the late 1990s, or early 2000s. We were—we made Russia a member of the G8 because they were part of the so-called Washington consensus about future development. So, it's only within the last few years that their defense buildups and more aggressive actions have actually gotten people to realize that this is a serious potential problem which we now need to devote some time and attention to. That's point one.

Point two is, while we've been otherwise engaged in these counterinsurgency fights, our adversaries have been developing both weapon systems and concepts for using them that we now have to engage in, but we also have an ongoing requirement to deter them with that which we already have. Even the development of new concepts is going to take some funding. There are some capabilities we know we need to invest in. Those are the ones that are identified—have been identified by Secretary Griffin, which we agree with in our report. But, we still have to deter, today. All those other capabilities are going to come online in some—at some point in the future, and how we put them into play is going to take some time to figure out. It's going to cost some money to do that, in

terms of exercises, gaming, all of that, as well as while you're developing the capability.

Senator PETERS. All right.

Thank you.

Chairman INHOFE. Thank you, Senator Peters.

Senator Perdue.

Senator PERDUE. Thank you, Mr. Chair.

I'd like to thank both of you, for the record, for your lifetime of service. I can't think of a more important period in our history that people like you, who have served their country, step up in a civilian role and do something like this. This is one of the best documents that I've seen in my 4-year tenure here.

On page 62, figure 10 is what I think speaks to the entire problem here. This is the funding issue that you're talking about. But, I think there are two overarching crises that we face as a country. One, we have a global security crisis that you're talking about today. The world's never been more dangerous in any time in my lifetime than right now. The second is, of course, this financial crisis that not only we, but the world, face. This can't be a question of, how much more can we spend? We can't spend enough. I've done the math. It's not there. Right now, in this—I can do this all day, but I want to get to a question that ties together something both of you have addressed already. This is not what I had planned to talk about, but I want to follow up on your conversation about allies and about threats.

Five threats across five domains is brand new. It's been developed at a time when we were withdrawing from the Middle East. Now we have a situation where we are trying to shoulder the burden, the way we have for the last 70 years since World War II. It can't happen. It can't continue any longer. If you look at the economic power of the people who believe in self-determination in the world, it's about $65 trillion. If you look at the people who are talking about state control, it's only about 14 or 15 trillion now, unadjusted—no more than 20, even if you adjust it for purchasing power. So, the numbers are on our side. The problem is, we're trying to do it all ourselves, sirs. When I look at that, the situation is, every dime that we spend on our military today, by definition, is borrowed money. I can prove that to you because of the way we have to spend money on mandatory expenses. Look, nobody's arguing about cutting those. The reality is, though, we can't continue to be the only security force in the world. We borrow about 30 percent of what we spent over the last decade. We're projected to spend about that—or borrow about the same amount. Our discretionary spending is actually less today than it was in 2009. That's less than 25 percent, so, by definition, every dollar that comes in has to go to mandatory expenses before we can spend money on our military, on anything else.

And just—you call out, on this chart, just one of the issues—just in the last 2 years, we've added $400 billion of interest to our expense sheet—400 billion. That's just a 200-basis-point increase in interest rates. Interest rates right now are still in the low quartile over the last 30 years. If we get back to the historic average of 5 and a half percent, we'll be spending a trillion dollars on interest, alone. So, your point's made.

Now the question. The Shanghai Cooperation Organization, we've seen it for some time now, but it's—there's a lot new—a lot of new energy around that, with people like Russia, India, Pakistan, Uzbekistan, Kazakhstan, et al. There are four nuclear powers inside that cooperative organization. How do you propose, in light of this reality that we have here, with the financial crisis that we have—how do we engage our allies, who face the same problems we do—they're going to have to take money from social programs, or somewhere, or tax more, or whatever, to afford to defend against these rising threats, when they don't have—China and Russia do not have the overhead that we have, they don't have limitations on time that we have to get to the answers, here, to compete? So, I'd like for you to address the idea of allied cooperation as a way out of this conundrum that we have, in terms of the need versus the resources, globally.

Ambassador EDELMAN. Well, Senator Perdue, I agree with you. I mean, allies are absolutely crucial element, here, and it's one of the reasons why we consulted broadly with allies when we were doing the report, and why we stress, in the course of the report, the importance of maintaining our allowance—both treaty alliances and then the non-treaty special relationships with countries that are almost tantamount to alliances that we have in places like the Middle East. Those are extremely important.

Burden-sharing among allies has been a problem, you know, for us since we first—you know, the ink was drying on the Washington Treaty in 1949, and it's not something, again, I think, that we will ever solve. We have to continue to work at it. I think, in response to the President's invocation of this issue a lot, allies are stepping up and contributing more. That's clearly the case. But, I think it's going to be harder to sustain more allied contributions to defense, which is difficult to motivate, as you note, in any event, if we're cutting, ourselves. I mean, that's usually not a formula for getting your allies to do more. We need to get them to do more. And, I would add, we need to think more about how we cooperate with them, in terms of defense industrial issues, to give them more incentive to cooperate with us and work with us and field the kinds of systems that they need to do things.

I mean, if you look, for instance, at, you know, Operation Odyssey Dawn, the Libya operation, where we consciously tried to put the allies forward first, they hit the bottom of their magazine in about—of precision-guided munitions—about 3 or 4 days. And so, we need to get them to invest in more of those capabilities, but I think we probably need to also do more to develop those capabilities with them so they have more of an industrial interest, along with us, in doing that.

Admiral ROUGHEAD. I agree, and I think one of the areas, particularly in the cooperative space, there needs to be a look at what are the policies with which we engage in these cooperative arrangements. Sometimes, I think it's a—it's an imbalance, it's a disincentive for what I would call the high-end allies to participate. You know, we have the five allies, but, you know, the technology in Japan is pretty extraordinary. So, you know, how should we deal with Japan in the areas of technical cooperation?

The other thing I think, as we move into this more complex environment, that we have to pay particular attention to are for those allies who are drawn to an adversary's systems. You know, it used to be that, you know, country X could get something from Russia, and it would be very isolated. As we deal more with networks and the exchange of data, allowing or making it more attractive for country X to go that route has a massive effect that it didn't used to have. So, when we think about, you know, a country that may be wanting to acquire an air defense system from Russia, what does that mean when we want to enter a network with that country?

So, it—we have to look at the bigger picture. But, I think opening up to some of the countries that have high-end technical capability, with different policies, different processes, different levels of cooperation, each one is going to be different, but I think that's an area that can pay off greatly.

Senator PERDUE. Thank you. Thank you for this body of work. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Perdue.

Senator Hirono.

Senator HIRONO. Thank you, Mr. Chairman.

I'm particularly interested in the focus on a whole-of-government approach, which we know that, particularly, China uses to their advantage. Frankly, both China and Russia have engaged in provocative acts in the cyber arena. With regard to China—I mean, with regard to Russia, their interference with our elections. Most recently, what Russia is doing with regard to the Ukraine. And if there is little or no response from the United States, doesn't this—our inaction, or little action—add to the perceived imbalance of power between the United States, vis-á-vis China and Russia? How do our allies view what is happening?

Ambassador EDELMAN. Senator Hirono, this is—it's a little bit beyond the remit of the report, but I'll take a shot at it, speaking personally, in any event.

You know, my belief is, actually, that both Russia and China today are waging what we would have called, in the 1950s, political warfare——

Senator HIRONO. Yes.

Ambassador EDELMAN.—against the United States and its allies. If we were having this discussion—I mean, we are very focused, in Washington, of course, on Russian political warfare, because of interference in the election in 2016 and ongoing. If we were having this conversation in Australia or New Zealand, I could tell you that the discussion would be about Chinese efforts to use these kinds of tools to develop greater influence, domestically, in Australia and New Zealand. We're beginning to get some of that discussion here in the United States, too, with the discussion about the use of Confucius Institutes and other elements of the Chinese Communist Party's United Front Department that orchestrates much of this political warfare. We used to have capability in this area in the late 1940s and 1950s. We did a little bit of it in the 1980s. But, since the end of the Cold War, we've essentially disassembled our capability, which is not—most of it was not in the Department of Defense, it was resident in other agency——

Senator HIRONO. Well, and when you talk about whole-of-government approach, though, it means more than just what the DOD is——

Ambassador EDELMAN. Right. Right.

Senator HIRONO. When we talk about what the other countries are—that Russia and China are employing the political warfare, that is the environment that we are currently in, I would say, to a great extent. So, if we're not aware of—well, we should be aware—of those aspects of their whole-of-government approach, and we're not doing very much in that regard, then we're behind the eight ball already.

Ambassador EDELMAN. I agree. I think we need to develop a capability—we need to redevelop the capability, and reacquaint ourselves, frankly, with the history of those earlier eras, when a combination of different means—diplomatic, intelligence, and others, now, you know, empowered with modern technology—could have similar kinds of effects to those that we had in earlier efforts, when we were quite successful.

Senator HIRONO. So, do you suggest another commission or some other way that we can focus on a whole-of-government approach that truly includes all of these aspects?

Ambassador EDELMAN. I mean, again, it's a little bit outside the remit of our report, but a commission on political warfare, I think, would perhaps be a useful idea.

Senator HIRONO. What do you think, Admiral?

Admiral ROUGHEAD. I'm always loathe to advocate for more overhead, but the thing that I would say is that——

Senator HIRONO. You need it.

Admiral ROUGHEAD.—you know, we talk about whole-of-government—I would say, in the case of China, it's whole-of-government integrated with the private sector, particularly as you get into AI, 5G, things like that. The question, I think, for us is, "Where do we want to be in that competitive space?" As they put in place this Belt and Road, everyone's been captured by the brick and mortar that's going in, but who are the companies that are going in and putting in the information systems? What are the standards that will be applied to 5G? How will the, you know, driverless cars be operated, and who will be the ones to set the standards for that? That's why I'd say the whole-of-government is really more than just defense. But——

Senator HIRONO. Well, I totally agree.

Admiral ROUGHEAD.—what we're talking about in that new technology——

Senator HIRONO. Yeah.

Admiral ROUGHEAD.—is national security and who sets the stage, who sets the standards, going forward. I think that's something that needs to be as—part of the issue.

I do think that one could make the case that what we're going through right now can, in the long run, be as impactful as what happened to us on 9/11. It's just happening in slower motion.

Senator HIRONO. So, I think that we do need to pay a lot more attention to these other aspects that are not specifically DOD, but it's all interconnected, our economic activities, what we do with re-

gard to China and Russia, and putting sanctions on them, et cetera.

I just, I'm going to say that some of the things that my colleagues mentioned about, how can we determine what kind of resources are needed if you're not really very clear on how you're going to implement? Now, you can have a National Defense Strategy, but, as you both indicated, that if we don't have a clear way to implement these strategies, or we don't understand it, I don't know how we're supposed to proceed. But, you know, I realize that numbers do matter. And you both say that our military needs to grow. So, our Army, Navy, Air Force, that there are far fewer of them than in the decades past. So, numbers matter, I agree. And a lot of resources will have to go to increasing those numbers.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Hirono.

Senator Kyl.

Senator KYL. Thank you very much, Mr. Chairman.

As a matter of personal privilege, let me comment, for just a moment, as a former member of this Commission, to compliment you and Senator Reed for the incredible support that you gave to the Commission, and to Senator McCain, for helping to create it, for appointing me to the Commission, and to reiterate what I believe Ambassador Edelman said in the beginning, which was that the quality of the members of this Commission was outstanding. I except myself from that. I learned a great deal from my fellow commissioners. I see that Ambassador Patterson is here. I don't know if there are any other members of the Commission who are here. I don't see any out there. But, we had a breadth of experience and expertise that I found just to be extraordinary. That's the first point that I wanted to make.

The second is that, while it's been said here, I wanted to reiterate it. This was a nonpartisan discussion. This was a group of like-minded people who—like-minded, in the sense that we cared very much about ensuring an adequate national security for our country. We approached the questions involved, I think, from an unbiased point of view, and reached—and this is probably the most important thing of all—a consensus. Here are 12 people. I assumed that there were six Democrats and six Republicans, because that's who appointed the members of the Commission, though I honestly don't even know about the politics of some of the people there. It was never apparent in the discussion. So, to me, it is extraordinary that this Commission reached a consensus. Now, there were some additional views from one of the members of the Commission, and I think that they were probably agreed to by the other members of the Commission, but he felt it important to express these additional thoughts. They were not contradictory to the consensus that the Commission reached. I want you all to appreciate that.

Now, I say all of this because if we're really going to do something about it—and one of the things this Commission said from the beginning is, "We would—we just don't want to this to be another report that sits on a shelf." This has to provide action, at the end of the day, if our year of activity, here, will not have been wasted activity, plus all of the other support that we got.

This means that—and because the Commission was created by having each of you—Senator McCain and Senator Reed each appoint three people, and the Chairman and Ranking of the House Armed Services Committee each appoint three people. The idea was to come back to this committee and to the HASC and report our findings and advocate for those findings. We also were supposed to, originally, advise the Secretary of Defense. But, because of the late start that we got, for a variety of reasons, the Secretary's defense strategy actually came out before ours. Nonetheless, we've been consulting with him very directly, and our two cochairmen have done a remarkable job of that.

But, what this means is that we need this committee and the House Armed Services Committee, and the Appropriations Committees in both the House and Senate, and the leadership of the House and Senate, and the Budget Committees, per discussion earlier with Senator Perdue, plus the OMB [Office of Management and Budget] and the President, all need to work together to try to address the issues here. If this Commission can reach a bipartisan—nonpartisan consensus on this, hopefully the members of this committee can reach across the Capitol, here, and talk to our colleagues in the House, and Democrats and Republicans can work together in a concerted way to solve these problems. That's my plea to all of you.

Finally, I think that the question that Senator Peters and, to some extent, Senator Hirono asked needs just a little bit of fleshing out. I'd like to give it my take and invite the panelists to add whatever they want to.

The question here is: Well, if we've criticized the Defense Department for not necessarily having a good and complete strategy in place, how can we then concur that it needs more resourcing? The answer is, both of those things are true, and can be true. Just a couple of examples that come my mind, for example. We talked a lot about logistics. We know that the strategic concept of the Defense Department is this, if there's a conflict, for example, in the South China Sea, we've got to move a bunch of assets from Europe and the United States over there as soon as possible, but we don't have the logistical capability to do that. So, we found both the strategy a little bit perplexing, here, and the need for more resourcing. Both of those things are true.

That's also true, for example, on the strategy of dealing with the fact that our peer competitors, Russia and China, now have an area-denial capability that we used to be able to deal with. Now we will find it very difficult without new weapons. So, while the strategy calls for getting into a European theater and dealing with Russians up close and personal, and the same thing with the Chinese, if there ever is a conflict there, we realize that we're going to have to have some new weapons to be able to do that, a lot of standoff capability that we don't have today.

The nuclear arena is another area. Cyber and space. All of these, we realize the strategy doesn't quite take into account the fact that we don't yet have what we need to implement a sensible strategy, and that's going to take more resources.

So, I think our colleagues deserved a little bit more of an answer there. And, if I could, now that my time is expired, Mr. Chairman,

would it be all right to ask the panelists to add anything they'd like to add here?

Chairman INHOFE. Certainly, it would be appropriate, and we'd be anxious to hear from them.

Senator KYL. Thank you for your time.

Chairman INHOFE. I'm sure they disagree with everything you said, but that's all right.

[Laughter.]

Admiral ROUGHEAD. No, Senator Kyl, you've summarized it up perfectly. I mean, the nature of what we will have to do, and what we currently have, it's an obvious shortcoming. Even though we mentioned in the report the percentage of nuclear recapitalization of the defense budget, we have to look at that in the context of the recapitalization budget. And so, it—it's pretty apparent, to your point. I think the way that you said it, that both can be true, summarizes it perfectly.

Ambassador EDELMAN. The only thing I have to add would be to say that, to the degree that this report is accessible to the layman and carries with it a sense of urgency, and also describes some ways that this could actually happen in the real world in a compelling way, a lot of that we owe to Senator Kyl's participation in the panel, which was very vigorous, and he was a—given the fact that it was kind of a bicoastal effort for him, he was an incredibly vigorous contributor and put in an enormous amount of time. I know that both of us are grateful to him for it, and glad that he's now on your panel.

Chairman INHOFE. Thank you, I say to both the witnesses.

Senator Kyl, you had expressed a concern—and you and I have seen these things happen before—about another report that sits on the shelf. I'll read to you the first sentence of the Chairman's program that we've—are going to be showing forward tomorrow. "Using the NDS Commission Report as a blueprint, enact recommendations from the Commission to ensure military readiness and modernization is repaired."

Senator INHOFE. Well, let me look, here. Senator King.

Senator KING. Thank you, Mr. Chairman.

I also want to commend the report, the way it's presented, how clear it is. I think it's a really useful document. I want to join Senator Perdue, one of the most useful I've seen in my time here. I also want to echo Senator Perdue's comment that figure 10 is especially revealing, and we should list interest rates as a strategic risk, because it won't be long before interest on the debt will exceed defense expenditures. Ironically, a portion of that interest goes to one our major adversaries. They can buy a aircraft carrier with the interest that we're going to pay them, to China, on the national debt.

I'm interested in comparing expenditures between China, Russia, and the United States. As a percentage of GDP, Russia is a little higher. They're about 4 percent. China's a little bit lower. They are 2—2 and a half percent. We're at 3.3, I think. So, all in the same range. But, in absolute dollars, they are way below us. Way below. Russia is one-tenth of our expenditures. China's about one-fifth. Yet, this whole premise of this document is that they are peer competitors. Are they being smarter than we are in their expenditures?

Are they being—do—are we being not very sensible, in terms of our expenditures? How come they've risen to the level of a peer competitor when spending one-tenth to—one-fifth to one-tenth of what we're spending? That's a question I get at home.

Ambassador EDELMAN. Yeah. It's a good question, Senator King.

So, look, first, we have a very, very capable professional military. But, as a result of that, personnel costs consume a much, much larger percentage of our budget than is the case in either China or Russia, where you have largely a conscript force. Russians are beginning to move in the direction of a mixed contract-and-conscript force, but they're still largely a conscript force.

Second, both of them have the luxury of concentrating, essentially, on their region of the world, as opposed to the global responsibilities which the United States has exercised for 75 years since the end of the second World War. That means they have the luxury of concentrating their investments in a couple of particular areas, and they have been very shrewd in schooling themselves in how—in the what you might call—"the American way of war," how we have fought in the Persian Gulf, how we fought in OIF [Operation Iraqi Freedom] and in Afghanistan. They have developed capabilities that seek to neutralize how we fight, and take advantage of weaknesses. I mean, the outstanding example is the one that Admiral Roughead gave earlier, which is, we have assumed, you know, since the end of the Cold War, unimpeded air and sea access——

Senator KING. Right.

Ambassador EDELMAN.—and that an aggressor can go in, accomplish some act, and then we'll go in and reverse the aggression, as we did in Kuwait. We're now dealing with adversaries who can contest the airspace and the seas.

Senator KING. Let me interrupt, because I think this is important, we could really spend some time on this. I hope, perhaps, the Commission could think about this, about how they are getting—are they getting more bang for their buck, I guess is the basic question? We can pursue this. But, let me ask another question, and that is, Are we—do we need a strategic and tactical realignment, in term—because of the development of the gray war? In other words, we've got massive capacity, both nuclear and conventional, and yet we're confronted with the closure of the strait at the north part of the Black Sea. Ukraine's not a NATO [North Atlantic Treaty Organization] ally, and yet clearly that's a dangerous situation for the world. Yet, how do we respond? What tools do we have? Do we need to be thinking about tools other than conventional military tools to deal with situations like that? I think this is a classic dilemma confronting American policymakers today.

Admiral ROUGHEAD. The one thing I'd—I might comment on, Senator, is, when you say that we have massive conventional capability, I would disagree with that. When I look—and again, we're dealing with regional challenges that—you know, obviously, the Asian littoral, our allies in Asia are very important to us, our stature——

Senator KING. Well, perhaps I misused the term "massive," but we have—we do have conventional capability. My point is, we're being confronted with unconventional challenges, where the con-

ventional response may not be either appropriate or effective. Do we need to think—have a broader sense of strategy and tactics to deal with "little green men" and the closure of—let's make it even more dramatic—the Bering Strait?

Admiral ROUGHEAD. Absolutely. I think that is the basis for our recommendations on the operational concepts: How do we really want to go after that? What is the best way to pull the levers of power in order to offset what is happening in these particular regions? But, I think it's important, too, that, you know, being there is important to us. When I look at, for example, the balance of China and the United States in East Asia on surface ships, they are about four or five to one of what we currently have there. Would we flow more? Yes, we likely would. Twenty-six, twenty-seven submarines operate in that area. And, oh, by the way, one of the things that doesn't show up on the nice charts are about 119 other ships that can shoot at you. I think we have to think in terms of that. And, oh, you know, China uses, in those two areas—East China Sea, South China Sea—their coast guard, which is really, when you look at some of their ships, they're about as big as our cruisers. This is where we believe the operational concepts are key, that it is not just the hardware. There is going to be cyber, there's going to be economic, there's going to be diplomatic. That's what we're driving at when we talk about, What are the concepts that we want to come at these problems with?

Senator KING. I appreciate that. Just to close out, I think one of the most important things you've said today was, we are in danger of a kind of slow-motion change of strategic balance, where we don't have a response, and, the next thing we know, there are islands in the South China Sea, the strait at the north of the Black Sea is closed, and we don't have a response. It's the frog in the water as the—it approaches boiling.

I appreciate your testimony and your work. Very, very important for the country. Thank you.

Thank you.

Chairman INHOFE. Thank you, Senator King.

Senator Tillis.

Senator TILLIS. Thank you, Mr. Chairman.

Thank you, gentlemen, for being on the Commission and your past service to the country.

I was going through the summary here, and was looking, first, at page 19, then page 22, when you start looking at the—you note two key risks. One is whether or not the whole of DOD can actually get its act together and execute, which is a very, I think, important thing to point out. You also note, in several instances, from the beginning of the report to the end of the report, the funding risk. And you have, basically, two tiers to it. You say that the NDS is at risk of being fully realized or implemented based on what you think are historical downward trends in funding. So, even if we don't let sequestration use the blunt-forth—force reductions, then you see a very real risk for funding. Has there ever been a defense strategy that looked at the whole of the DOD and finding efficiencies a key pillar of the strategy, looking inside itself and trying to figure out where the efficiencies are to fund these strategic initiatives? Ambassador Edelman, I know you've been doing this for a while. Has

there ever been that focus on the National Defense Strategy, actually enabling the DOD to execute?

Ambassador EDELMAN. There have been various efforts. I know, at the beginning of the Obama administration, for instance, there was a—an effort under Secretary Gates to find—to identify, I think, $100 billion worth of efficiencies, and the deal that they had cooked with OMB was, they'd be able to keep the money, but OMB welched on the deal and they didn't get the money. This is all described in Secretary Gates's memoir in excruciating detail. I'm not aware, Senator Tillis, of any strategy that specifically pointed at this, although the current strategy also talks about doing business differently in order to generate more capability. We looked at some of the reform proposals, and we agree that the Department of Defense needs to be reformed in the way it does business, particularly, those of us who are advocating more money for defense, you know, need to be able to tell you so that you can tell taxpayers and voters that the Department of Defense is spending the money wisely and appropriately. But, even at the high end of estimates of what might be wrung out of the Department, in terms of efficiency——

Senator TILLIS. Still not enough.

Ambassador EDELMAN.—it's usually about a—on the high end, it would be about 150 billion over 10 years, and it's not even close to filling the——

Senator TILLIS. Right.

Ambassador EDELMAN.—the hole we're talking about.

Senator TILLIS. Well, it just seems to me that, if you were taking a look at—if you read through your report, I mean, what we're saying: at current course and speed, we're unlikely to achieve the objectives of the National Defense Strategy, either because we have organizational execution challenges or because we have very real and very likely resourcing shortfalls. I think it's very important—you know, the conclusion that I draw from this—to have great strategy, but you have neither the organization nor the resources to execute it successfully. Is that a fair assessment?

Ambassador EDELMAN. Unless we change some of the assumptions about resourcing and——

Senator TILLIS. That's why I said "current course and speed."

Ambassador EDELMAN. Yeah. Correct.

Senator TILLIS. Thank you.

Chairman INHOFE. Thank you, Senator Tillis.

Senator Blumenthal.

Senator BLUMENTHAL. Thanks, Mr. Chairman.

I wonder if you could indicate whether you think that the National Defense Strategy, in our current path forward on undersea warfare, in terms of construction of submarines, both the Columbia-class and the Virginia-class attack submarine, is likely to meet the needs that you think have to be met.

Admiral ROUGHEAD. Senator, thank you for the question.

I would say that the Commission discussed, "What specific things should we recommend, as far as increasing capability, capacity?" We discussed, Would there be tables of various capabilities? And we did not do that. However, one of the systems that is mentioned in the report is the need for submarines. Undersea dominance,

given how we will have to get to where we want to go, is absolutely key. And that is one of the areas where our adversaries have—they know it's our strength, and will go after that. So, clearly, the need to make sure that we have the required numbers of submarines is something that we highlighted in the report. So, you know, that is a huge issue for us, because we do own the undersea now. I think we should never lose it. And we have to make the investments in that regard.

Senator BLUMENTHAL. I noted that you—that you did refer to it specifically in the report, and that's why—I mean, my conclusion from your report is that we will be falling short of that goal on the present path.

Admiral ROUGHEAD. That's correct, sir. We're actually in a downslope at the same time that other countries are investing heavily in their submarines. I mentioned the numbers that China is able to put out. And, you know, there was a time where we questioned the quality of those submarines. I would argue that, today, that would be a mistake, to question the quality of what they're putting out there.

Senator BLUMENTHAL. In fact, we're at grave risk of losing that undersea dominance that we've enjoyed for quite a long time, as long as we have been involved, I think, in naval warfare, which is a tremendous threat to our national security. Would you agree?

Admiral ROUGHEAD. I would say it's the precursor to the movement of reinforcement that we would require in the Middle East, in Asia, or in Europe, and upon which our allies would be able to continue the fight, as well. So, seizing the undersea, making sure that we own it, and then moving the sealift that is also in short supply. We highlight both air and sealift in the report, as well.

Senator BLUMENTHAL. A number of us on the committee have referred to the interference in the 2016 elections by the Russians as an attack on our country. And I think, not only members of this committee, but, I think, pretty widely, that that kind of language has been used. I've actually called it—and others on the committee, as well—an act of war. How would you characterize it?

Ambassador EDELMAN. Senator Blumenthal, I think it might have been before you came in, but, in response to a question from Senator Hirono, I made the comment that I think both Russia and China are waging political warfare against the United States every day.

Admiral ROUGHEAD. As Ambassador Edelman mentioned, we put some scenarios in the report. And one of those is a bit more extensive than just election interference, but it's the waging of cyber warfare, and targeting it at critical elements of how we live our lives and how we operate. And I think that, again, is something that needs to be part of a broader public discussion and debate.

Senator BLUMENTHAL. Do you think we have adequate standards for what constitutes an act of war in the cyber domain?

Admiral ROUGHEAD. I, personally, believe that we do not have clarity on that at all. And it's hard. There is no question about it. It's a different environment. There are so many aspects of it. But, again, this is where I believe the strategic discussions, the deliberations, the work that is done here needs to be followed through to lead to those standards and strategies.

Senator BLUMENTHAL. Thank you for your excellent testimony today.

Thank you.

Chairman INHOFE. Thank you, Senator Blumenthal.

Senator Sullivan.

Senator SULLIVAN. Thank you, Mr. Chairman.

Gentlemen, I appreciate your excellent report and also your decades of service, so I want to thank you for that.

I wanted to kind of focus on a couple of glass-half-full elements of, not just the report, but what's happening in some of these areas.

First, so you mention this big shift to great-power competition. So, I'm assuming that both of you are supportive of what I think are pretty serious and good documents, the Trump administration's National Security Strategy and the National Defense Strategy. Do you agree that those were timely and an important shift in strategy?

Ambassador EDELMAN. Absolutely.

Admiral ROUGHEAD. Timely and, as we articulated in the report, a good first step.

Senator SULLIVAN. I agree with that. I do think it doesn't get enough coverage here in the press, but it's also gotten pretty strong bipartisan support, and certainly on this committee and in the Senate. How is the Pentagon reacting to your report and to the NDS and to the National Security Strategy? I do get a sense, sometimes, when I meet with our leadership, that the inertia of, hey, staying focused on, you know, the last 20 years of what we've been doing post-9/11, very important, no doubt, but I'm not sure having a predator drone-feed trailing a mid-level guy on a motorcycle in Afghanistan who may or may not be a Taliban low-level official is the best use of our forces. I'm just giving that as an anecdote. Are they coming around to this, the building and to your report?

Admiral ROUGHEAD. In all honesty, Senator, I will be able to answer that question—I'm headed over to the Pentagon this afternoon——

Senator SULLIVAN. So, you haven't gotten a reaction——

Admiral ROUGHEAD. I have not spoken to——

Senator SULLIVAN.—from the Pentagon to your report?

Admiral ROUGHEAD.—anyone directly in the Pentagon since we issued our report, no.

Ambassador EDELMAN. I think, by and large, the reaction I've had so far, Senator Sullivan, has been appreciation for the recognition that the strategy needs to be adequately resourced, and I think, as well, agreement on the emphasis on future areas—future capabilities and on missile defense and on the Nuclear Posture Review. Slightly less enthusiastic reception for some of the findings on civil/military relations.

Senator SULLIVAN. Let me ask another one. Admiral, I think you have a lot of experience in the Asia-Pacific scenario that I care a lot about. I like to remind some of my colleagues here: every time I go home, I'm in the Asia-Pacific. Anchorage, my hometown, is closer to Tokyo than it is to Washington, D.C. So, we are an Asia-Pacific nation.

The Chinese reaction to the National Defense Strategy and National Security Strategy was kind of this feigned, "Oh, my gosh, I

can't believe you're focusing on us." Haven't the Chinese been focused on that very issue, the flip side of this, for 40-plus years?

Admiral ROUGHEAD. I think the Chinese have had a very, very close focus and a very informed strategy, and they have stuck to it, and, as a result of that, we find ourselves in a different position than we were a couple of——

Senator SULLIVAN. So, we need to take with a little bit of grain of salt the notion that they're shocked that all of a sudden we're recognizing what they've been focused on for 40 years, which is great-power competition, correct?

Admiral ROUGHEAD. Yes, sir. The scene from Casablanca comes to mind.

Senator SULLIVAN. Yeah, me, too.

Admiral ROUGHEAD. Yeah.

Senator SULLIVAN. Real quick, another glass-half-full issue, I think, our allies. So, we are a ally-rich nation. Our adversaries and potential adversaries are ally-poor. Not a lot of people wanting to join the North Korea team, even the Russia team, and even the China team, to be honest. I believe a big reason for that is trust. Yes, we're not a perfect country, but most of our allies intuitively trust us. We're not going to invade them. Any—you know the whole issue there. Isn't it true that China and Russia have been, for decades, viewing—one of their strategic goals is to splinter our alliances?

Admiral ROUGHEAD. No question in my mind. And I think that that was the basis for including in our report the importance of the alliance relationships, because China, in particular, is keen on fracturing those that we have in Asia, and then to be able to influence events there in a way that they can't with our presence and influence.

Senator SULLIVAN. Just real quickly, because I do have one more question I want to ask on regional issues, but how are we doing, from your perspective? If our goal is to deepen and expand our alliances, are we doing a good job on that? What more should we be doing?

Ambassador EDELMAN. I think that our alliances are still pretty robust, but there are growing questions about how committed the United States is going to remain to these allies in the long run. When I meet with our allies, they ask questions about comments that the United States should be nation-building in the U.S. as opposed to overseas. So, what does that mean? What does "America first" mean? I mean, there are a lot of questions about the longevity of our commitment to the alliances, although I think the alliances today are still pretty strong.

Senator SULLIVAN. Mr. Chairman, if I may ask just one final question.

Admiral, you know, you've spent a lot of time studying on one of the issues where we talk about, in this report, expanding the competitive space and look at different regions. There was a big Washington Post piece, just yesterday, I believe, on the Arctic and the competition there. It's an area where I think this committee's starting to focus on. Can you just give me your views? I didn't see it highlighted or mentioned in the report, which kind of surprised me. But, there's a lot going on there. It's—happens to be my home

State. America is an Arctic nation because of Alaska, and there's a lot happening there. Are we doing enough? And what more should we be doing in that realm?

Admiral ROUGHEAD. Senator, you may have heard me say that the Lower 48 probably has a different view of being an Arctic nation than I think folks in Alaska do.

Senator SULLIVAN. Well, the Chairman was with me in Alaska recently.

Admiral ROUGHEAD. Right.

Senator SULLIVAN. I think he understands——

Admiral ROUGHEAD. But, I would say that it is extraordinarily important that there be a national Arctic strategy. It has to include energy, it has to include trade, because the sea routes will open. We can question how well traveled they will be. The resources that are on the bottom of the Arctic Ocean are going to be much sought after. China is probably moving into the Arctic more aggressively than any other country. Hopefully, it'll make the Russians a bit nervous, as well.

But, you know, we really need to think about how we want to operate there. What are the—what's the type of infrastructure that we have to put in place, not only for national security purposes, but to serve the people in the Arctic whose lives are changing forever? So, you know, an Arctic strategy and how we want to resource that, I think, is hugely important. Not covered in our report. Those are my views on it.

Senator SULLIVAN. Well, I look forward to working with you and the committee on those issues.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Sullivan.

Senator Warren.

Senator WARREN. Thank you, Mr. Chairman.

There's no doubt that the Budget Control Act contributed to a decline in defense spending, but I just want to put that in some perspective. The defense budget bottomed out at an eye-popping $586 billion in fiscal year 2015. Despite that decline, we still spend more than the next seven nations combined, and that includes several of our allies. So, what have we gotten with all that money? I read the first line in the Commission report, which says, quote, "The security and well-being of the United States are at greater risk than anytime in decades."

Let me ask the question this way, Ambassador Edelman. This can't just be about money, because if money could solve this problem, we would have solved it already. Assume, just for a minute, that the 2020 budget cap of $576 billion will not be lifted. How would you prioritize between force structure, readiness, and modernization and still stay within that cap?

Ambassador EDELMAN. You know, I think that hypothetical question, Senator Warren, is difficult to answer unless you make some preliminary judgments about what it is you don't want to do. In other words, you know, what is it that we are going to stop doing? Are we going to stop the fight against ISIS? Are we going to get out of Afghanistan? Are we going to be less willing to protect the South China Sea or Taiwan or reinforce our allies in Europe? I mean, because, at that level of spending, you will not be able to do

all of those things, which are all things that the current strategy says we should do, albeit taking some risks——

Senator WARREN. Well, I——

Ambassador EDELMAN.—in some areas.

Senator WARREN. I'm sorry, but it's not really a strategy just to keep saying "more." We have to talk about priorities. You know, the United States will spend more than $700 billion on defense this year alone. That's more, in real terms, than President Ronald Reagan spent during the Cold War. It's more than everything the Federal Government spends on highways, education, medical research, border security, housing, the FBI [Federal Bureau of Investigation], disaster relief, the State Department, foreign aid, everything else in the discretionary budget put together. And I've heard a lot of talk about a hollow military in recent years. But, if we continue to prioritize investment in defense at the expense of infrastructure, education, basic research, then we will have a hollow country. Our Nation's strength flows directly from our competitiveness in these areas, and we need to stop treating domestic policy and national security as if they're unrelated to each other. You want to talk about what we're not doing, what we're not doing is making a lot of investments we need to make to make this country stronger.

Let me ask a question from a different perspective. Ambassador Edelman, the Commission recommended that Congress should, quote, "hold the Secretary accountable for ensuring robust civilian control." Let me ask on that—I want to dig in on the question that Senator Reed started with—what specific recommendations do you have for us on that? What questions should we be asking DOD leaders, both in civilian and uniform, when they come before this committee?

Ambassador EDELMAN. Senator Warren, before I take that on, I do want to get back to the first issue you raised. I actually agree with you on the need for adequate domestic spending on infrastructure. I think all of those things that you cited are things that also contribute enormously to the national security. And it's one reason why I think the Budget Control Act is so poorly designed, because the issue—the long-term-debt issue, if you look at the CBO's [Congressional Budget Office] 20-year projections, is clearly driven by Medicare, Medicaid, and Social Security. It's entitlement spending, not discretionary spending. The problem that we have is that we spend all our time fighting with one another over which pieces of this shrinking discretionary pie we get. And I think that's, you know, not good for the health of the country at home or abroad.

On the civil/military issue——

Senator WARREN. Well, I—surely you're not saying you think we should cut Social Security so that we can spend more money on defense.

Ambassador EDELMAN. No. I think we need to reform our entitlement spending so that we're not——

Senator WARREN. I——

Ambassador EDELMAN.—so we're not——

Senator WARREN. You can't use the word "reform" as a way to ally the fundamental question, and that is the priorities about

where we're spending our money and whether we should be spending—I just wanted to hear about priorities——

Ambassador EDELMAN. Right.

Senator WARREN.—because we are spending, this year, $700 billion on defense, and the only priority I hear from you and from this report is "more." That can't be an answer.

Ambassador EDELMAN. I agree. There's no amount of money we can spend that gets us out of the conundrum—conundra that we're facing with Russia and China. The report goes at great length to say that, in addition to sufficient resources, we need new operational concept and other new capabilities that may, in the long run, save us money, but I don't think are a magic bullet.

On the civil/military piece, ma'am, I would say that I don't think there's new legislation that's needed. I think there is plenty of authority in title 10 for civilians to do their job. I think what's really important is for those jobs to be filled and for people to be there, occupying. I think we have at least one, I think maybe two, Assistant Secretary positions in OSD policy that are vacant right now. Those jobs just need to be filled, and need to be filled in a timely manner. And we need some longevity in those positions so that people can amass the experience that allows them to deal as equals with their military peers.

Senator WARREN. Well, I appreciate your raising the point. You know, our uniformed servicemembers are incredibly talented. I know that everyone wants to hear their opinions, and values it. But, there's a reason that the Constitution puts the hard calls on the civilian part of government. And we need to make sure that's strong enough to handle those calls.

Ambassador EDELMAN. I completely agree.

Senator WARREN. Thank you.

Chairman INHOFE. Thank you, Senator Warren.

Senator Nelson.

Senator NELSON. Thank you, Mr. Chairman.

Good morning, gentlemen. And you've really contributed a lot by bringing this.

Admiral, seeing you, and not having seen you for a while, I am reminded that, when you were a one-star, you were tasked with the duty of the first congressional delegation into Afghanistan, led by no less than John McCain. And I'll never forget going in, lights out, into Bagram, and then meeting with a group of military members from Florida. And we met in a bombed-out aircraft hangar, where you could see the sky through that bombed-out roof. So, it's a great set of memories that I have for you, all the way up through your illustrious career to the top position in the Navy. So, thank you.

Mr. Ambassador, thank you for your service.

I have observed, over the years, the rapid technological advances in our commercial companies. Seeing this, for example, in telecommunications, seeing this in our civilian space program—of course, what so many of the contractors provide for defense. Do you see opportunities for expanded commercial military operations? And where do you see that?

Admiral ROUGHEAD. Well, thank you, Senator, and thank you for all that you've done for those who have served over the years. And, as you alluded to, you know, in our lives, we all have little vi-

gnettes that are forever there, and that time with you and Senator Reed and others in Afghanistan is exactly one of those for me. So, thank you.

I think that the need for there to be civil/military cooperation, particularly in the technological space, is imperative, going forward. It's all well and good that we may create a cell out in Silicon Valley, but, if we can't make it easy for companies to be able to work quickly, smoothly, effectively, cooperatively within the Department of Defense acquisition system, I think we're just going to increase frustration, because we'll be calling for more cooperation, and we just make it hard.

I think that—and again, as the report calls out—that we have to look at some particular areas where, you know, the regulations may have to be changed, or some relaxations made, that allow that to happen, because if we can't get that flow going and that level of cooperation, I think that we'll be just shouting louder, and nothing will be happening. And so, that was one of the reasons why we wanted to highlight that in the report.

I'm encouraged, based on our interaction with people in the Department of Defense, that they're working mightily at that. But, inertia has to be overcome, regulations have to be changed, and there has to be an acceptance that sometimes things just aren't going to work.

I would go back to our early days of the space program, and I would argue that, if we probably had as many missteps as we had back then, we'd be getting nothing done today. So, you know, we really need to relook at how we move into this new technical space with a different set of eyes and different set of rules and some support for where the Department wants to go.

Senator NELSON. That's a good comparison, to the civilian space program, where NASA [National Aeronautics and Space Administration] had always done it, and done it well, but, with the technological innovations in the commercial sector, and with the creation of a new plan through the NASA authorization bill of 2010, it set the entire civilian space program on a dual track. We're tasking NASA to explore the heavens, but we need the commercial space sector to take off and provide a lot of the services that NASA still needed. So, that's a good parallel as you look at the national defense, going forward.

Mr. Ambassador, I wanted to ask you. It seems that we have put less emphasis on Africa, specifically through Secretary Mattis. And yet, we see China investing all over the continent. Would you comment on that?

Ambassador EDELMAN. Truth be told, I think Africa's been neglected by, you know, more than just this administration. It's been an area that we haven't focused on really very much, except in the counterterrorism domain, since—really since the Cold War ended. But, it's certainly an area where China, for instance, is investing very heavily. I think there are something like 2 million Chinese now living on the African continent, working on various Chinese industrial projects that are meant, obviously, to spread Chinese influence in the region. So, I think it's an area that we neglect, you know, at our peril, but it is not, I think, right now anyway, one that requires a military response to.

I would just, if I could, Senator, join Admiral Roughead in thanking you for your service on this committee. I think this is the tenth time I've testified before the committee. I think you've almost always been here. So, thank you very much for your service to the Senate Armed Services Committee.

Senator NELSON. Thanks, Mr. Chair.

Chairman INHOFE. Thank you. I would add to that, because it's not just this committee, but Senator Nelson and I have been on two major committees for a long period of time, and his contribution has always been very great. I appreciate it very much.

Did you have anything further?

Senator REED. No, sir.

Chairman INHOFE. I do have—at the very beginning of this—and we can make this kind of quick—I asked a couple of questions I was hoping that would be responded during the course of other people's questions, one having to do with using the word of the——

Senator REED. "Disequilibrium."

Chairman INHOFE.—I said I've never used that before, but I enjoyed reading it——

[Laughter.]

Chairman INHOFE.—between China and Russia's nuclear modernization, as opposed to our aging nuclear fleet and the fact that we've been doing nothing while they have been—granted, we started out way ahead, but where are we now? And how would you respond to what they're doing in that nuclear area?

Ambassador EDELMAN. Senator, so if you look at both China and Russia, they've both been engaged in pretty vigorous nuclear modernization programs over the last decade. If you look at the Russians, they're building a new road-mobile ICBM [Intercontinental Ballistic Missile], they're building a new heavy ICBM, they are testing a rail-mobile ICBM, although it's not clear whether they will ultimately deploy it. And they have been developing concepts in their literature for use of low-yield theater nuclear weapons——

Chairman INHOFE. Yeah.

Ambassador EDELMAN.—that could be very troublesome if they were actually put into effect. So, that's on the Russian side.

On the Chinese side, you see a very big qualitative improvement. They're developing MIRVs [Multiple Independent Reentry Vehicle] and MARVs [Maneuverable Reentry Vehicle]. And that numerical buildup is not quite as visible, but it is ongoing.

And so, we have two nuclear adversaries with much more modern nuclear arsenals than we do, and at least one of them exploring concepts that could be very dangerous in a time of crisis, because it might actually lead to someone deciding that they could use some of these weapons in a way that would be below the threshold that would necessitate a U.S. response.

Chairman INHOFE. And this is the area that your report holds out as the number-one issue that we're dealing with, too.

Ambassador EDELMAN. Right. And so, I think—our judgment was that the commitment of the current administration, which actually builds on the previous administration's commitment to modernize our nuclear triad, is worth sustaining, and that the findings of the Nuclear Posture Review struck us as reasonable answers to all of those problems.

Chairman INHOFE. Yeah.

Admiral ROUGHEAD. I would also add, Senator, that the work that China is doing in hypersonics, what type of weapons will be on those vehicles, that poses problems as far as they're no longer on this very easily determined point of origin of where it came from, where did it come from. Defensive systems that are optimized against ballistic missiles, those have to be relooked. And again, this adds to that growing to-do list, if you will. And these are hard technical problems that will require resources. And so, you know, it's a significantly challenging area, and we have kind of taken our eyes off the ball of nuclear policy, nuclear deterrence, creating a group of future thinkers that will be able to deal with it. Because it's not going to go away. I think all of us would like to put the genie back in the bottle, but it's not happening.

Chairman INHOFE. Well, one thing—and I'd like to ask this for the record, because it'll be far—I'd like to have you give more thought to it—and that is to list the areas, the—and I listed a few of them in my opening statement, or I guess in my first questions—where China and/or Russia is actually ahead of us, or catching up with us. If you could do that, just for the record, I'd like to—that'd be very helpful for me to have the benefit of that.

Admiral ROUGHEAD. Yes, sir.

Chairman INHOFE. All right. Well, thank you——

Yes. Go ahead.

Senator REED. Just one point, here. I chaired the trip with Senator Nelson to Afghanistan, and it was one of the many kindnesses and examples of leadership and friendship that he extended to me through a long time. So, thanks, Bill. Good being with you.

Thank you for getting us back home, Admiral.

And one point—we've had a discussion back and forth about Social Security, et cetera—the Commission is very clear about not—looking at the entire Federal budget for ways in which we could deal with this resource issue, including taxes, as well as entitlements. And I think that should be noted. And I commend the Commission.

Thank you, Mr. Chairman.

Chairman INHOFE. Yes, sir.

We are adjourned.

[Whereupon, at 11:44 a.m., the Committee adjourned.]

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